PENTAIR

FLECK 2900S

SERVICE MANUAL

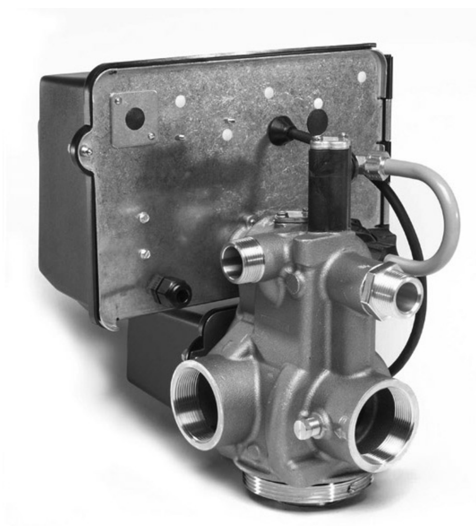


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CALIFORNIA PROPOSITION 65 WARNING

⚠ WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

JOB SPECIFICATION SHEET

Job Number:______________________________

Model Number:______________________________

Water Hardness: ______________________ppm or gpg

Capacity Per Unit:______________________________

Mineral Tank Size: __________ Diameter:________Height:________

Salt Setting per Regeneration: ______________________

1. **Type of Timer:**
   - A. 7 Day or 12 Day
   - B. Meter Initiated
2. **Downflow: Upflow Upflow Variable**
3. **Meter Size:**
   - A. 3/4-inch Std Range (125 - 2,100 gallon setting)
   - B. 3/4-inch Ext Range (625 - 10,625 gallon setting)
   - C. 1-inch Std Range (310 - 5,270 gallon setting)
   - D. 1-inch Ext Range (1,150 - 26,350 gallon setting)
   - E. 1-1/2 inch Std Range (625 - 10,625 gallon setting)
   - F. 1-1/2 inch Ext Range (3,125 - 53,125 gallon setting)
   - G. 2-inch Std Range (1,250 - 21,250 gallon setting)
   - H. 2-inch Ext Range (6,250 - 106,250 gallon setting)
   - I. 3-inch Std Range (3,750 - 63,750 gallon setting)
   - J. 3-inch Ext Range (18,750 - 318,750 gallon setting)
   - K. Electronic ____Pulse Count ___ Meter Size ____________
4. **System Type:**
   - A. System #4: 1 Tank, 1 Meter, Immediate, or Delayed Regeneration
   - B. System #4: Time Clock
   - C. System #4: Twin Tank
   - D. System #5: 2-5 Tanks, Interlock Mechanical
2-4 Tanks, Interlock Electronic
Meter per unit for Mechanical and Electronic
   - E. System #6: 2-5 Tanks, 1 Meter, Series Regeneration, Mechanical
2-4 Tanks, 1 Meter, Series Regeneration, Electronic
   - F. System #7: 2-5 Tanks, 1 Meter, Alternating Regeneration,Mechanical
2 Tanks only, 1 Meter, Alternating Regeneration, Electronic
   - G. System #9: Electronic Only, 2-4 Tanks, Meter per Valve, Alternating
   - H. System #14: Electronic Only, 2-4 Tanks, Meter per Valve. Brings units on and offline based on flow.
5. **Timer Program Settings:**
   - A. Backwash:______________________ Minutes
   - B. Brine and Slow Rinse:________________ Minutes
   - C. Rapid Rinse: ______________________ Minutes
   - D. Brine Tank Refill: ___________________ Minutes
   - E. Pause Time: ______________________ Minutes
   - F. Second Backwash: __________________ Minutes
6. **Drain Line Flow Control: gpm**
7. **Brine Line Flow Controller: gpm**
8. **Injector Size#:**
9. **Piston Type:**
   - A. Hard Water Bypass
   - B. No Hard Water Bypass

INSTALLATION

Water Pressure

A minimum of 20 pounds (1.4 bar) of water pressure is required for regeneration valve to operate effectively.

Electrical Facilities

An uninterrupted alternating current (A/C) supply is required.

NOTE: Other voltages are available. Please make sure your voltage supply is compatible with your unit before installation.

Existing Plumbing

Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/or iron should be replaced. If piping is clogged with iron, a separate iron filter unit should be installed ahead of the water softener.

Location Of Softener And Drain

The softener should be located close to a drain to prevent air breaks and back flow.

Bypass Valves

Always provide for the installation of a bypass valve if unit is not equipped with one.

CAUTION Water pressure is not to exceed 125 psi (8.6 bar), water temperature is not to exceed 110°F (43°C), and the unit cannot be subjected to freezing conditions.

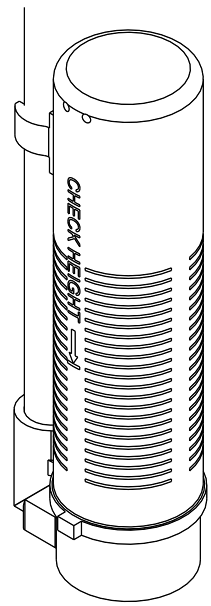
Installation Instructions

1. Place the softener tank where you want to install the unit making sure the unit is level and on a firm base.
2. During cold weather, the installer should warm the valve to room temperature before operating.
3. All plumbing should be done in accordance with local plumbing codes. The pipe size for residential drain line should be a minimum of 1/2-inch (13 mm). Backwash flow rates in excess of 7 gpm (26.5 Lpm) or length in excess of 20 feet (6 m) require 3/4-inch (19 mm) drain line. Commercial drain lines should be the same size as the drain line flow control.
4. Refer to the dimensional drawing for cutting height of the distributor tube. If there is no dimensional drawing, cut the distributor tube flush with the top of the tank.
5. Lubricate the distributor o-ring seal and tank o-ring seal. Place the main control valve on tank.

NOTE: Only use silicone lubricant.

6. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6 inches (15 cm) between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
7. Plumber tape is the only sealant to be used on the drain fitting. The drain from twin tank units may be run through a common line.
8. Make sure that the floor is clean beneath the salt storage tank and that it is level.
9. Place approximately 1 inch (25 mm) of water above the grid plate. If a grid is not utilized, fill to the top of the air check (Figure 1) in the salt tank. Do not add salt to the brine tank at this time.
10. On units with a by-pass, place in by-pass position. Turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the system is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.
11. Slowly place the by-pass in service position and let water flow into the mineral tank. When water flow stops, slowly open a cold water tap nearby and let run until the air is purged from the unit.
12. Plug unit into an electrical outlet.

NOTE: All electrical connections must be connected according to local codes. Be certain the outlet is uninterrupted.



60002 Rev E

Figure 1 Residential Air Check Valve

START-UP INSTRUCTIONS

The water softener should be installed with the inlet, outlet, and drain connections made in accordance with the manufacturer's recommendations, and to meet applicable plumbing codes.

1. Turn the manual regeneraton knob slowly in a clockwise direction until the program micro switch lifts on top of the first set of pins. Allow the drive motor to move the piston to the first regeneration step and stop. Each time the program switch position changes, the valve will advance to the next regeneration step. Always allow the motor to stop before moving to the next set of pins or spaces.

NOTE: For electronic valves, please refer to the manual regeneration part of the timer operation section. If the valve came with a separate electronic timer service manual, refer to the timer operation section of the electronic timer service manual.

2. Position the valve to backwash. Ensure the drain line flow remains steady for 10 minutes or until the water runs clear (see above).
3. Position the valve to the brine / slow rinse position. Ensure the unit is drawing water from the brine tank (this step may need to be repeated).

STARTUP INSTRUCTIONS *CONTINUED*

4. Position the valve to the rapid rinse position. Check the drain line flow, and run for 5 minutes or until the water runs clear.
5. Position the valve to the start of the brine tank fill cycle. Ensure water goes into the brine tank at the desired rate. The brine valve drive cam will hold the valve in this position to fill the brine tank for the first regeneration.
6. Replace control box cover.
7. Put salt in the brine tank.

NOTE: Do not use granulated or rock salt.

3200 TIMER SETTING PROCEDURE

How To Set Days On Which Water Conditioner Is To Regenerate (Figure 2)

Rotate the skipper wheel until the number "1" is at the red pointer. Set the days that regeneration is to occur by sliding tabs on the skipper wheel outward to expose trip fingers. Each tab is one day. Finger at red pointer is tonight. Moving clockwise from the red pointer, extend or retract fingers to obtain the desired regeneration schedule.

How To Set The Time Of Day

1. Press and hold the red button in to disengage the drive gear.
2. Turn the large gear until the actual time of day is at the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.
3. The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
4. Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.
5. In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

How to Adjust Regeneration Time

1. Disconnect the power source.
2. Locate the three screws behind the manual regeneration knob by pushing the red button in and rotating the 24 hour dial until each screw appears in the cut out portion of the manual regeneration knob.
3. Loosen each screw slightly to release the pressure on the time plate from the 24-hour gear.
4. Locate the regeneration time pointer on the inside of the 24 hour dial in the cut out.
5. Turn the time plate so the desired regeneration time aligns next to the raised arrow.
6. Push the red button in and rotate the 24 hour dial. Tighten each of the three screws.
7. Push the red button and locate the pointer one more time to ensure the desired regeneration time is correct.
8. Reset the time of day and restore power to the unit.

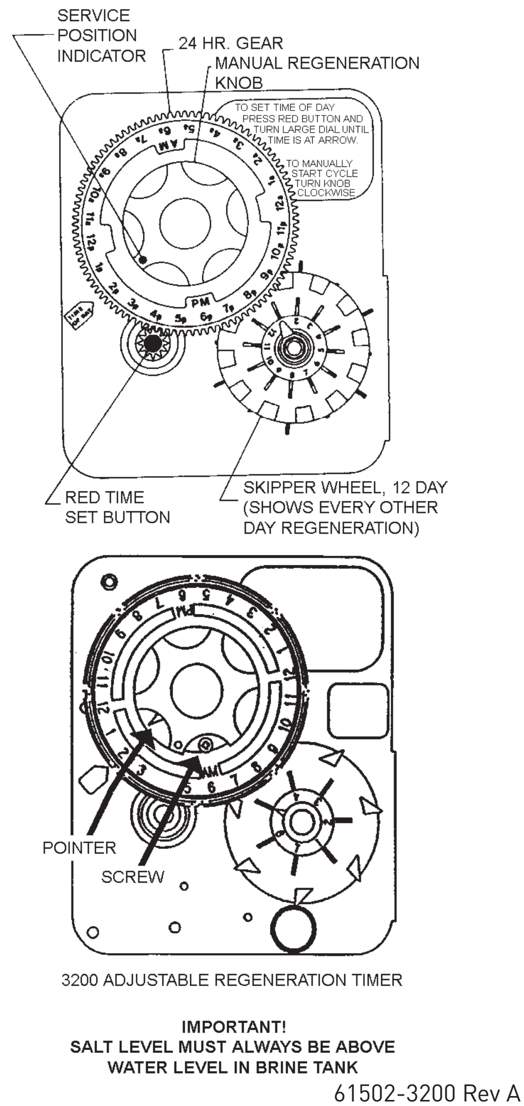


Figure 2

3210 & 3220 TIMER SETTING PROCEDURE

Typical Programming Procedure

Calculate the gallon capacity of the system, subtract the necessary reserve requirement and set the gallons available opposite the small white dot on the program wheel gear (Figure 3).

NOTE: Drawing shows 8,750 gallon setting. The capacity (gallons) arrow (15) shows zero gallons remaining. The unit will regenerate tonight at the set regeneration time.

How To Set The Time Of Day

1. Press and hold the red button in to disengage the drive gear.
2. Turn the large gear until the actual time of day is opposite the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

3210 & 3220 TIMER SETTING PROCEDURE *CONTINUED*

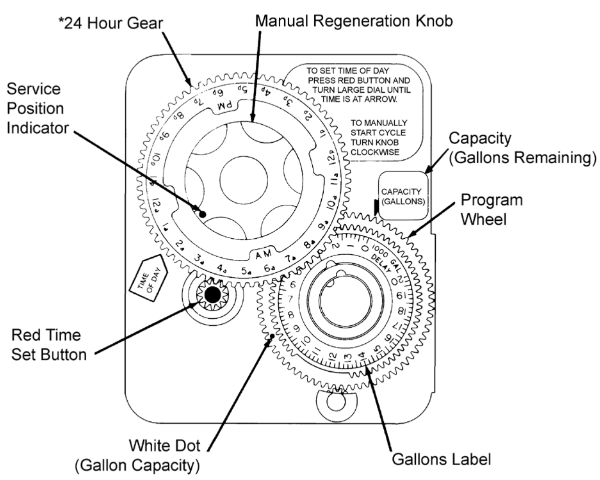
3. The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
4. Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.
5. In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Immediate Regeneration Timers

These timers do not have a 24 hour gear. Setting the gallons on the program wheel and manual regeneration procedure are the same as previous instructions. The timer will regenerate as soon as the capacity gallons reaches zero.

NOTE: The program wheel to the left may be different than the program wheel on the product.

NOTE: To set meter capacity rotate manual knob one - 360° revolution to set gallonage.



*Immediate regeneration timers do not have a 24-hour gear. No time of day can be set.

61502-3200 Rev A

Figure 3

3200, 3210, 3220, 3230 REGENERATION CYCLE SETTING PROCEDURE

How To Set The Regeneration Cycle Program

The regeneration cycle program on your water conditioner has been factory preset, however, portions of the cycle or program may be lengthened or shortened in time to suit local conditions.

3200 Series Timers (Figure 4)

1. To expose cycle program wheel, grasp timer in upper left-hand corner and pull, releasing snap retainer and swinging timer to the right.
2. To change the regeneration cycle program, the program wheel must be removed. Grasp program wheel and squeeze protruding lugs toward center, lift program wheel off timer. Switch arms may require movement to facilitate removal.
3. Return timer to closed position engaging snap retainer in back plate. Make certain all electrical wires locate above snap retainer post.

Timer Setting Procedure

How To Change The Length Of The Backwash Time

The program wheel as shown in the drawing is in the service position. As you look at the numbered side of the program wheel, the group of pins starting at zero determines the length of time your unit will backwash.

For example, if there are six pins in this section, the time of backwash will be 12 min. (2 min. per pin). To change the length of backwash time, add or remove pins as required. The number of pins times two equals the backwash time in minutes.

How To Change The Length Of Brine And Rinse Time

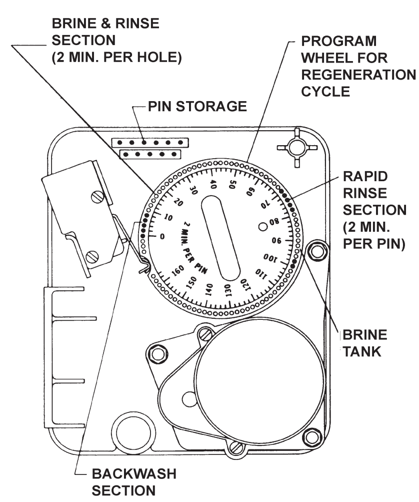
1. The group of holes between the last pin in the backwash section and the second group of pins determines the length of time that your unit will brine and rinse (2 min. per hole).
2. To change the length of brine and rinse time, move the rapid rinse group of pins to give more or fewer holes in the brine and rinse section. Number of holes times two equals brine and rinse time in minutes.

How To Change The Length Of Rapid Rinse

1. The second group of pins on the program wheel determines the length of time that your water conditioner will rapid rinse (2 min. per pin).
2. To change the length of rapid rinse time, add or remove pins at the higher numbered end of this section as required. The number of pins times two equals the rapid rinse time in minutes.

How To Change The Length Of Brine Tank Refill Time

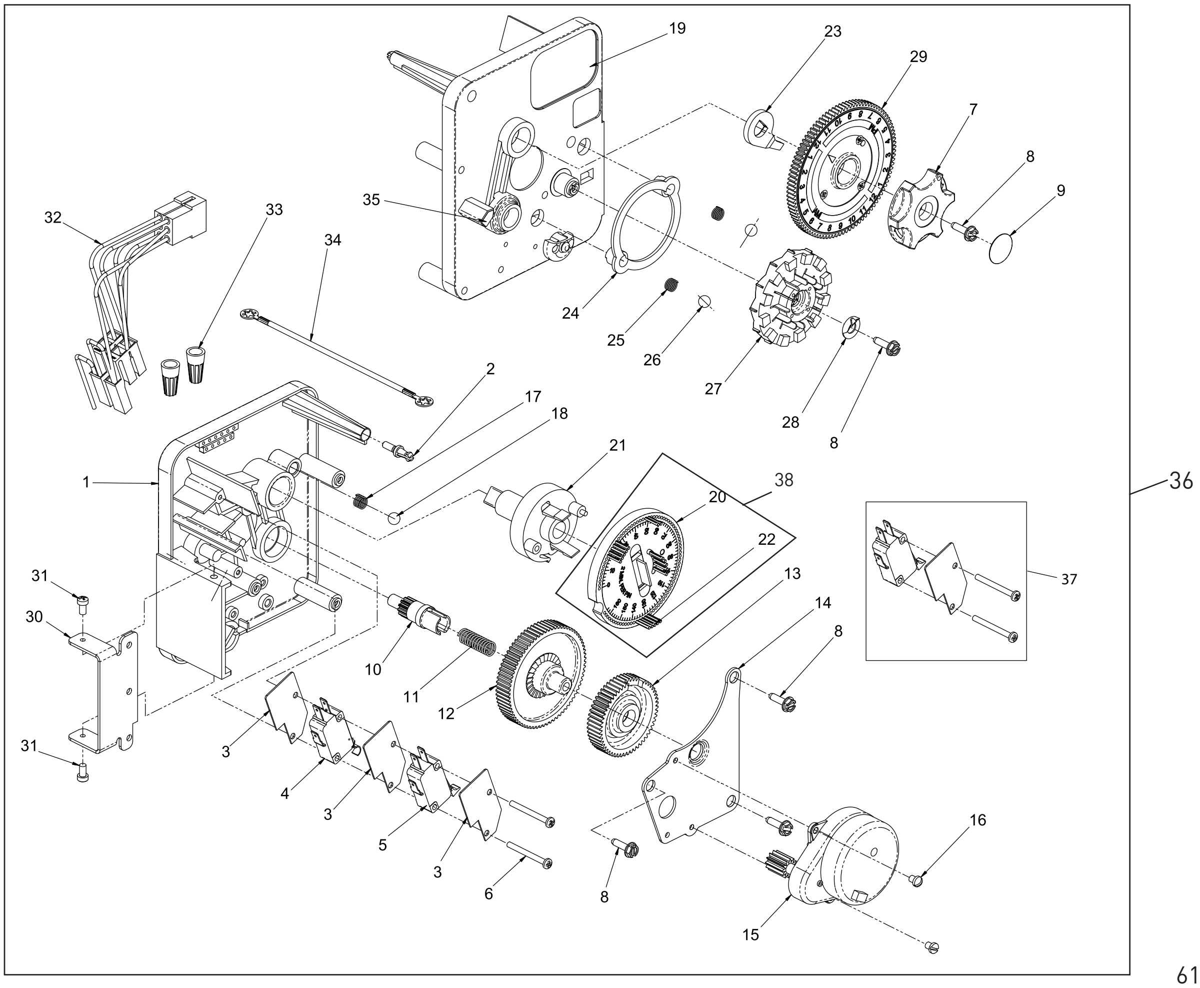
1. The second group of holes in the program wheel determines the length of time that your water conditioner will refill the brine tank (2 min. per hole).
2. To change the length of refill time, move the two pins at the end of the second group of holes as required.
3. The regeneration cycle is complete when the outer microswitch is tripped by the two pin set at end of the brine tank refill section.
4. The program wheel, however, will continue to rotate until the inner micro switch drops into the notch on the program wheel.



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Figure 4

3200 TIME CLOCK TIMER ASSEMBLY



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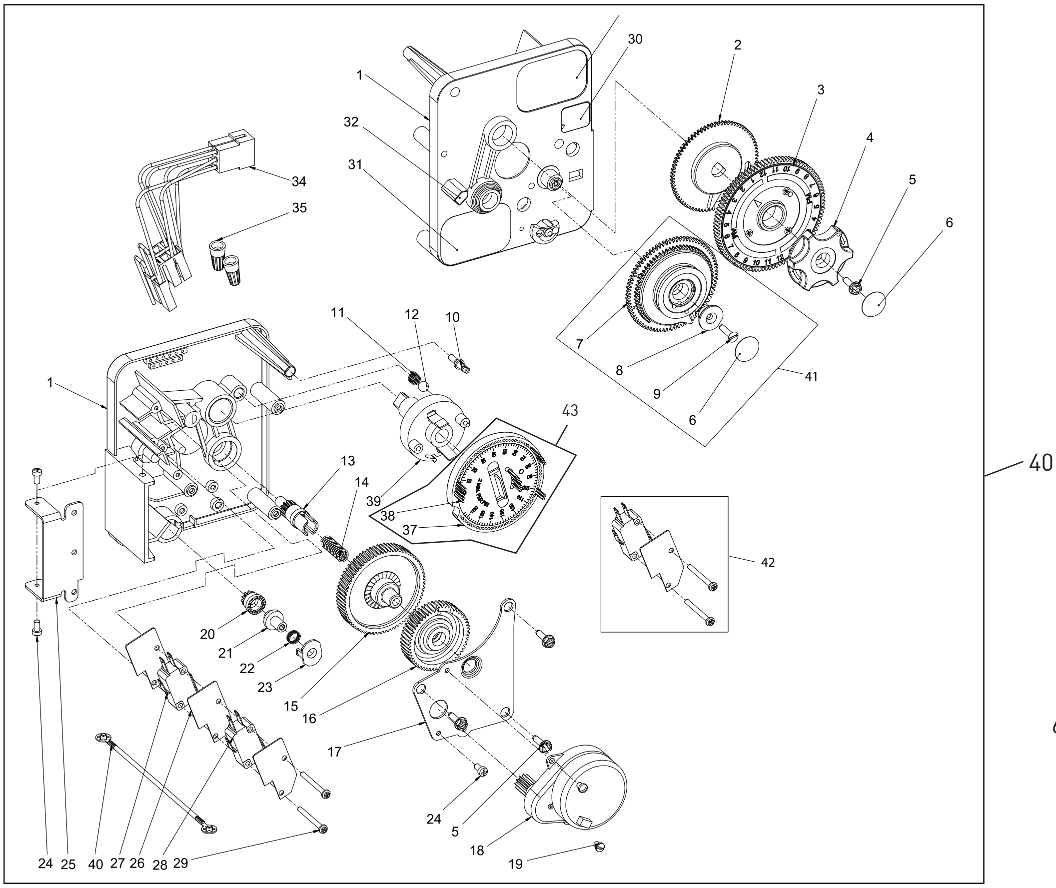
3200 TIME CLOCK TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer, 3200
2	1	14265	Clip, Sping
3	3	14087	Insulator
4	1	10896	Switch, Micro
5	1	15320	Switch, Micro, Timer
6	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
7	1	13886	Knob, 3200
8	5	13296	Screw, Hex Wsh, 6-20 x 1/2
9	1	11999	Label, Button
10	1	13018	Pinion, Idler
11	1	13312	Spring, Idler Shaft
12	1	13017	Gear, Idler
13	1	13164	Gear, Drive
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd 6-32 x .156
17	1	15424	Spring, Detent, Timer
18	1	15066	Ball, 1/4-inch, Delrin
19	1	15465	Label, Caution
20	1	19210	Program Wheel Assy
21	1	13911	Gear, Main Drive, Timer
22	17	41754	Pin, Spring, 1/16 x 5/8 SS, Timer
23	1	13011	Arm, Cycle Actuator
24	1	13864	Ring, Skipper Wheel
25	2	13311	Spring, Detent, Timer
26	2	13300	Ball, 1/4-inch, SS
27	1	14381	Skipper Wheel Assy, 12 Day
	1	14860	Skipper Wheel Assy, 7 Day
28	1	13014	Pointer, Regeneration
29	1	40096-24	Dial, 12 AM Regen Assy, Black
		40096-02	Dial, 2 AM Regen Assy, Black
30	1	13881	Bracket, Hinger Timer
31	2	11384	Screw, Phil, 6-32 x 1/4 Zinc
32	1	13902	Harness, 3200
33	2	40422	Nut, Wire, Tan
34	1	15354-01	Wire, Ground, 4 inches
35	1	14007	Label, Time of Day
36	1	*	Complete 3200 Time Clock Timer Assembly
37		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
38		61420-03	Program Wheel, Gear Assy, Filter 2 Min Per Pin
		61420-04	Program Wheel, Gear Assy, Softener, 2 Min Per Pin

*Call your distributor for Part Number

3210 METER DELAYED TIMER ASSEMBLY



61502-3210 Rev A

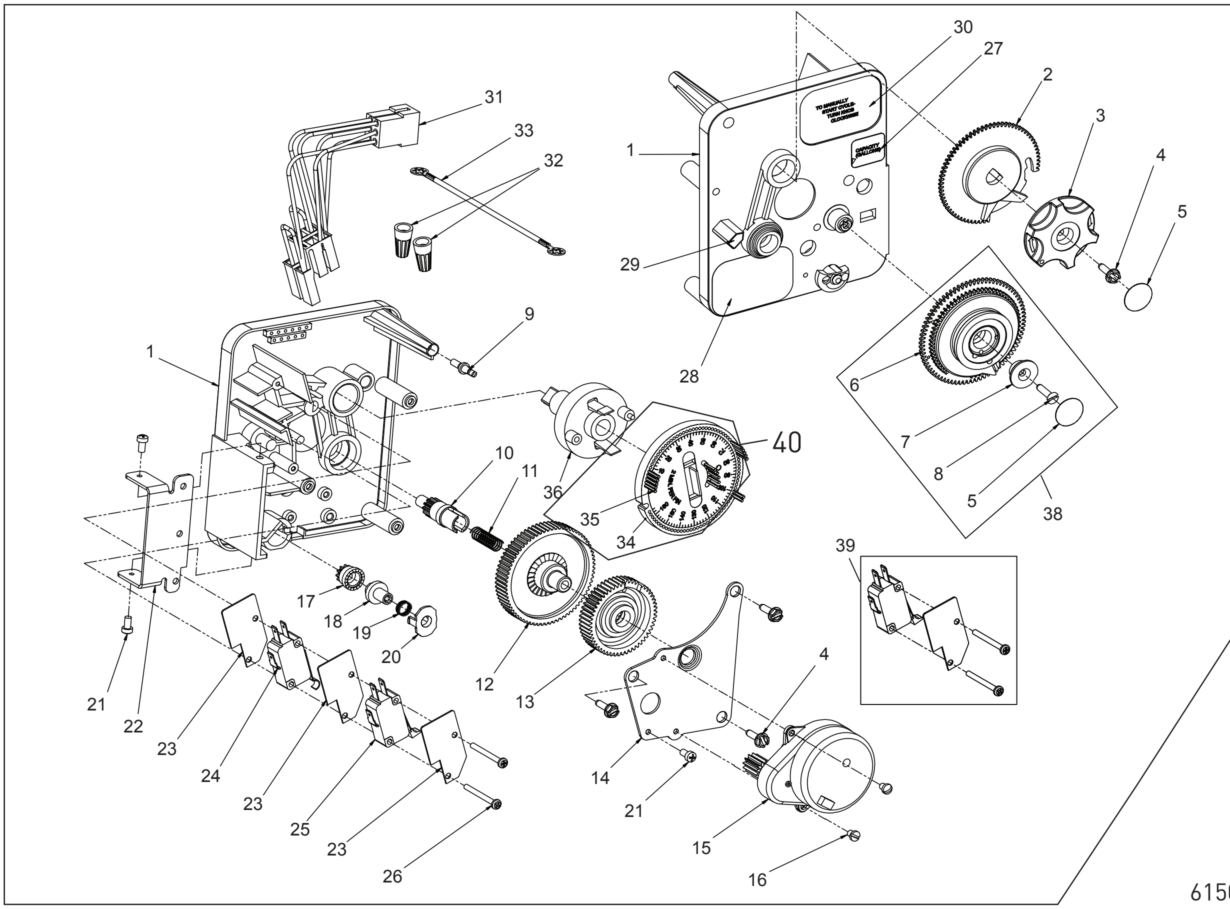
3210 METER DELAYED TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer, 3200
2	1	13802	Gear, Cycle Actuator
3	1	40096-02	Dial 2 AM Regen Assy, Black
4	1	13886	Knob, 3200
5	4	13296	Screw, Hex Wsh, 6-20 x 1/2
6	2	11999	Label, Button
7	1	13803	Gear, Program Drive Wheel
8	1	13806	Retainer, Program Wheel
9	1	13748	Screw, Flat Head St, 6-20 x 1/2
10	1	14265	Clip, Spring
11	1	15424	Spring, Detent, Timer
12	1	15066	Ball, 1/4-inch Delrin
13	1	13018	Pinion, Idler
14	1	13312	Spring, Idler Shaft
15	1	13017	Gear, Idler
16	1	13164	Gear, Drive
17	1	13887	Plate, Motor Mounting
18	1	18743-1	Motor, 120V, 60Hz 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
19	1	13278	Screw, Fillister Hd, 6-32 x .156
20	1	13830	Pinion, Program Wheel Drive
21	1	13831	Clutch, Drive Pinion
22	1	14276	Spring, Meter, Clutch
23	1	14253	Retainer, Clutch Spring
24	3	11384	Screw, Phil, 6-32 x 1/4
25	1	13881	Bracket, Hinge Timer
26	3	14087	Insulator
27	1	10896	Switch, Micro
28	1	15320	Switch, Micro, Timer
29	2	11413	Screw, Pan Hd Mach, 4-40 x 1 1/8
30	1	14198	Label, Indicator
31	1	15465	Label, Caution
32	1	14007	Label, Time of Day
33	1	14045	Label, Instruction
34	1	13902	Harness, 3200
35	2	40422	Nut, Wire, Tan
36	1	15354-01	Wire, Ground, 4 inches
37	1	19210	Program Wheel Assy
38	17	41754	Pin, Spring, 1/16 x 5/8 SS, Timer
39	1	13911	Gear, Main Drive, Timer
40	1	*	Complete 3210 Meter Delayed Timer Assembly
41		60405-50	Program Wheel, w/2-inch STD Label 0-21,000 gal
		60405-60	Program Wheel, w/2-inch EXT Label 0-100,000 gal
		60405-61	Program Wheel, w/2-inch EXT Range 375 m3
42		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
43		61420-03	Program Wheel, Gear Assy, Filter 2 Min Per Pin
		61420-04	Program Wheel, Gear Assy, Softener, 2 Min Per Pin

*Call your distributor for Part Number

3220 METER IMMEDIATE TIMER ASSEMBLY



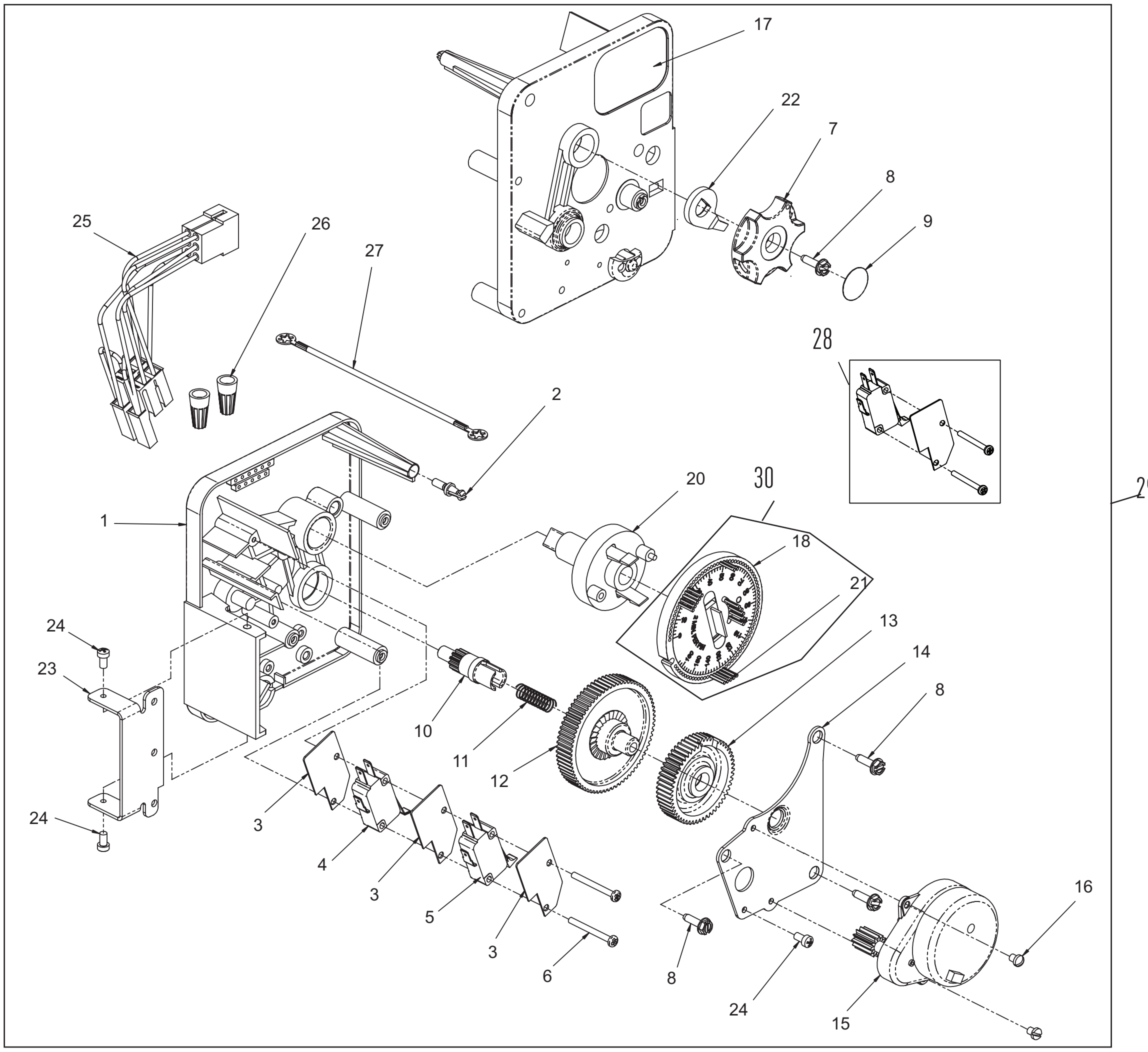
61502-3220 Rev B

3220 METER IMMEDIATE TIMER ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer
2	1	15431	Gear, Cycle Actuator, System #5
3	1	13886	Knob, 3200
4	4	13296	Screw, Hex Wsh, 6-20 x 1/2
5	2	11999	Label, Button
6	1	13807	Gear, Program Drive Wheel
7	1	13806	Retainer, Program Wheel
8	1	13748	Screw, Flt Hd St, 6-20 x 1/2
9	1	14265	Spring Clip
10	1	13018	Pinion, Idler
11	1	18563	Idler Shaft Spring
12	1	13017	Gear, Idler
13	1	13164	Drive Gear
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60 Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd
17	1	14502	Pinion, Program Wheel
18	1	14501	Clutch, Drive Pinion
19	1	14276	Meter Clutch Spring
20	1	14253	Retainer, Clutch Spring
21	3	11384	Screw, Phil, 6-32 x 1/4 Zinc
22	1	13881	Bracket, Hinge Timer
23	3	14087	Insulator
24	1	15414-00	Micro Switch
25	1	15320	Switch, Micro, Timer
26	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
27	1	14198	Label, Indicator
28	1	15465	Label, Caution
29	1	14007	Label, Time of Day
30	1	15148	Label, Instruction
31	1	40617	Harness, 3220
32	2	40422	Nut, Wire, Tan
33	1	15354-01	Wire, Ground, 4 inches
34	1	19210-05	Program Wheel Assembly, 9000/3230
35	17	41754	Pin, Spring, 1/16 x 5/8 Stainless Steel, Timer
36	1	15055	Gear, Main Drive
37	1	*	Complete 3220 Meter Immediate Timer Assy
38		60405-50	Program Wheel, w/2-inch STD Label 0-21,000 gal
		60405-60	Program Wheel, w/2-inch EXT Label 0-100,000 gal
		60405-61	Program Wheel, w/2-inch EXT Range 375 m3
39		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
40		61420-06	Program Wheel, Gear Assy, Softener Immediate 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immediate 2 Min Per Pin

*Call your distributor for Part Number

3230 REMOTE START TIMER ASSEMBLY



61502-3230R REV A

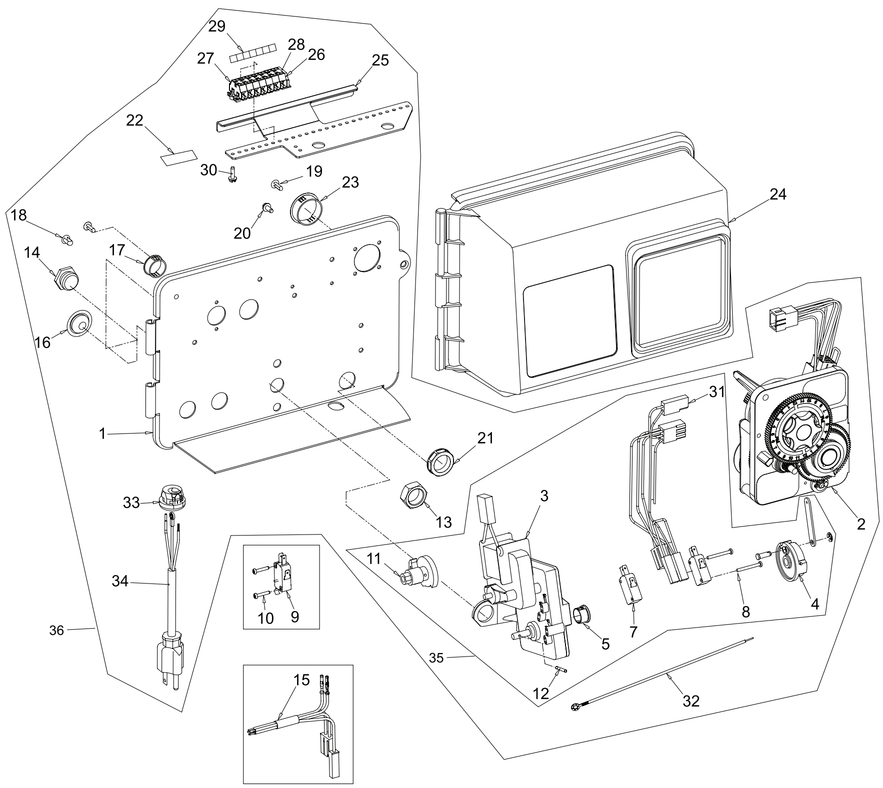
3230 REMOTE START TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer
2	1	14265	Spring Clip
3	3	14087	Insulator
4	1	15314	Micro Switch
5	1	15320	Switch, Micro, Timer
6	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
7	1	13886	Knob, 3200
8	4	13296	Screw, Hex Wsh, 6-20 x 1/2
9	1	11999	Label, Button
10	1	13018	Pinion, Idler
11	1	18563	Idler Shaft Spring
12	1	13017	Gear, Idler
13	1	15055	Drive Gear
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60 Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 23V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd
17	1	15313	Label, Caution
18	1	19210-05	Program Wheel Assembly, 3200
20	1	15055	Main Drive Gear
21	17	41754	Pin, Spring, 1/16 x 5/8 Stainless Steel, Timer
22	1	13011	Cycle Actuator Arm
23	1	13881	Bracket, Hinge Timer
24	3	11384	Screw, Phil, 6-32 x 1/4 Zinc
25	1	16336	Harness, 3230R
26	2	40422	Nut, Wire, Tan
27	1	15354-01	Wire, Ground, 4 inches
28		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
29		*	3230 Timer Assy
30		61420-06	Program Wheel, Gear Assy, Softener Immediate 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immediate 2 Min Per Pin

*Call your distributor for Part Number

UPPER ENVIRONMENTAL POWERHEAD ASSEMBLY



61501-2900 Rev G

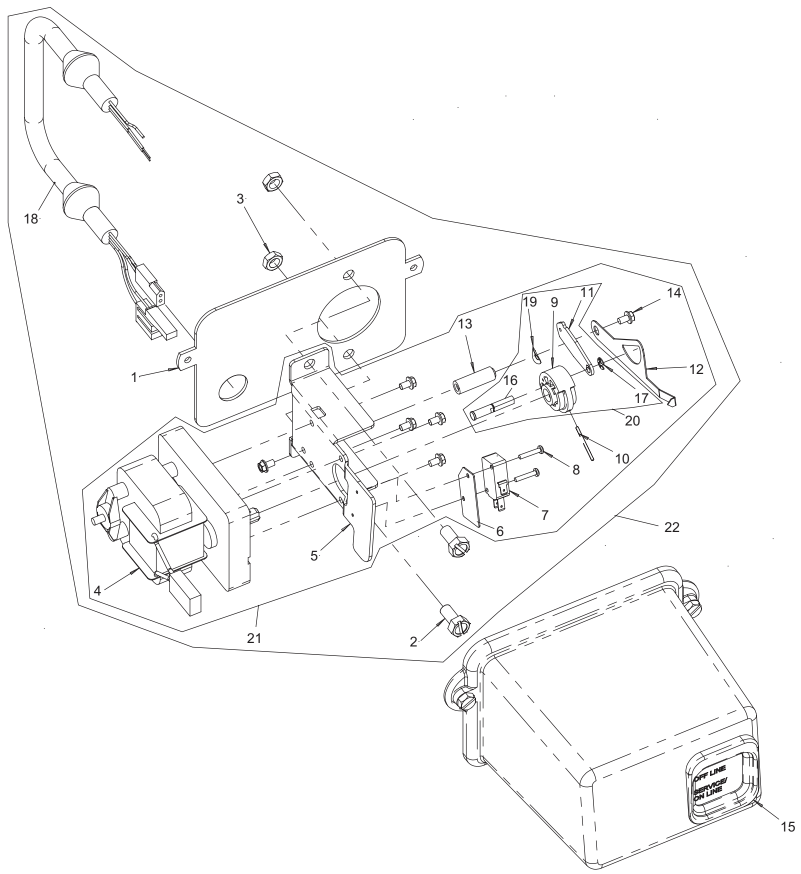
UPPER ENVIRONMENTAL POWERHEAD ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
1	1	18697-15	Backplate, Hinged
2	1		3200 Clock Timer Assembly
			3200 Meter Timer Assembly
3	1	41543	Motor, Drive, 115V, 50/60 Hz
		42579	Motor, Drive, 24VAC/DC, 50/60 Hz
		41545	Motor, Drive, 230V, 50/60 Hz
4	1	60160-15	Drive Cam Assembly, STF, Blue, 2900
		60160-30*	Drive Cam Assembly, Upflow
		60160-31*	Drive Cam Assembly, Upflow, Variable
5	1	17904	Bushing, Heyco 1/2, Heyco #2073
7	2	10218	Switch, Micro
8	2	14923	Screw, Pan Hd Mach, 4-40 X 1 MS Steel Zinc
9	1	10896	Switch, MIcro
10	2	11805	Screw, Rd Hd, 4-40 X 5/8 TYPE 1 Steel Zinc
11	1	12472	Cam Assy, Tri-Stack, After RR
		12777	Cam, Shut-Off Valve
		15770	Cam Assy, Special Tri-Stack, After Brine Fill
		15805	Cam, SVO
		19887*	Cam, Brine, 2750 U/F, Std
12	2	10338	Pin, Roll 3/32 x 7/8
13	1	10269	Nut, Jam, 3/4-16
14	1	43560	Fitting, Brine Valve
15	1	14822	Harness, 2900
16	2	19691	Plug, .750 Dia Recessed, Black
17	1	15806	Plug, Hole, Heyco #2693
18	1	19801	Plug, .190 Dia, White Heyco 0307
19	7	19800	Plug, .140 Dia, White Heyco 0304
20	4	10300	Screw, Slot Hex Wsh, 8-18 X 3/8 Type "B" RC 44-47
21	1	18691-02	Nut, Conduit Fitting 1/2-inch
22	1	40038-03	Label, Voltage, 120V, 3200ET
23	1	17421	Plug, 1.20 Hole Heyco #2733
24	1	60219-02	Cover Assembly, Environmental, Black w/ Clear Window
25	1	19772	Bracket, Terminal Block
26	1	40174	Terminal Block, Green/ Yellow Commercial, 809-260/141
27	6	41084	Terminal Block, Segment, Gray
28	1	41085	Endplate, Terminal Block, Gray
29	2	15250	Label, Terminal Strip
30	2	13296	Screw, Hex Wsh, 6-20 6-20 x 1/2 Type 25 Steel Zinc
31	1	40400	Harness, Drive, Designer/ Environmental
32	1	40175-01	Wire, Ground, Commercial Valves
33	1	13547	Strain Relief, Flat Cord Heyco #30-1
		13547-01	Strain Relief, Euro Round Cord
		13547-02	Strain Relief, U.S. Round
34	1	11545	Powercord, 4-foot European, Black
		19303	Powercord, 8-foot, Australian
		40084-12	Powercord, 12-foot US, Round, 120V,Sys 5,6,7&2900/3150/3900
		40085-12	Powercord, 12-foot US, Round, 240V
35		60050-23	Drive Assy, 2750, STF, 24V 50/60 Hz, Downflow Less Lower Drive Brine Cam Switch, Item 9 & 10
		60050-22	Drive Assy, 2750, STF, 220V 50/60 Hz, Downflow Less Lower Drive Brine Cam Switch, Item 9 & 10
		60052-21	Upper Drive Assy, 2900, STF 120V, Downflow
		60052-217	Upper Drive Assy, 2900, STF 120V, System 7, Downflow
36		**	Upper Powerhead Assembly
Not Shown:			
	1	15216	Meter Cable Assembly, 15.25-inch
	1	15879	Cable Guide Assembly, 2900

*Upflow Only

**Call your distributor for Part Number

LOWER ENVIRONMENTAL POWERHEAD ASSEMBLY



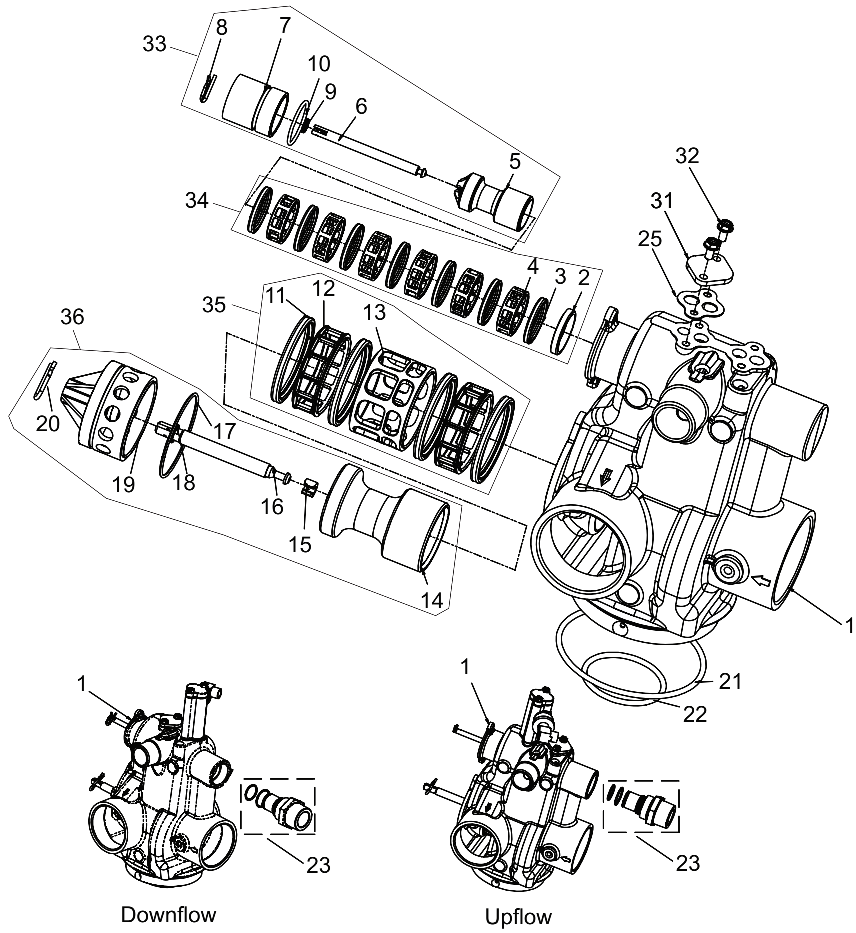
61501-2900 Rev G

LOWER ENVIRONMENTAL POWERHEAD ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
1	1	18709	Backplate, Lower
2	2	11224	Screw, Slotted Hex Head
3	2	16346	Nut, Hex, Jam, 5/16-18, 18-8-SS (only used for shipping)
4	1	40387	Motor, Drive, 115V, 60 Hz, SP FAM
		42580	Motor, Drive, 24 Vac/Dc, 50-60 Hz, Fam 2
		40389	Motor, Drive, 220V, 50/60 Hz, SP
5	1	14769	Bracket, Motor, 2900
6	1	10302	Insulator, Limit Switch
7	1	10218	Switch, Micro
8	2	19849	Screw, Pan HD, 4-40 x 5/8
9	1	14775	Cam, Main Drive, 2900 Lower
10	1	41022	Pin, Roll 2900 Lower
11	1	14759	Link, Piston Rod
12	1	18725	Indicator, Service/Standby
13	1	18726	Spacer, Indicator
14	6	10872	Screw, Hex WSH, 8-32 x 5/16
15	1	60217-02	Cover Assy, 2900, Lower, Black
16	1	42979	Bearing, Connecting Rod
17	1	42980	Ring, Retaining
18	1	42446	Harness, Lower Drive SYS4, ENV
		40405	Harness, Lower Drive, Sys 4 Remote Start
		40406	Harness, Lower Drive, Sys 5 & 6, Duplex, Enviromental
		40405	Harness, Lower Drive Syst 5 Multiple, Enviromental
		40405	Harness, Lower Drive Syst 6 Multiple, Lead, Enviromental
		40406	Harness, Lower Drive, Sys 6, Multiple, Middle/Lag, Enviromental
		40407	Harness, Lower Drive, Syst #7, Duplex, Lead, Enviromental
		40408	Harness, Lower Drive, Syst 7, Duplex, Lag, Enviromental
		40398	Harness, Lower Drive, Syst #7, Multiple, Enviromental
19	1	18727	Washer, Curved Spring, /265 ID
20		60160-22	Drive Cam Assy, Link, Enviromental, 2900 Lower Drive
21		60055-53	Lower Drive Assy, 2900, 24/60, System #4
		60055-51	Lower Drive Assy, 2900, 120, System #4
		60055-52	Lower Drive Assy, 2900, 220, System #4
		60255-51	Lower Drive Assy, 2900, 120, System #5 and #6, Lead/Lag
		60056-51	Lower Drive Assy, 2900, 120, System #7, Lead
		60056-61	Lower Drive Assy, 2900, 120, System #7, Lag
22		*	2900 Lower Powerhead Assembly
Not Shown:			
	1	14044	Tie, Cable, HeyCo VNT # 4-18
	1	43062	Grease, Lubriplate, 630-2
		60320-11	Switch Kit, 2900 Lower Drive, Adding Second Switch
		60320-08	Switch Kit, 2900 Lower Drive, Adding Third Switch

*Call your distributor for Part Number

CONTROL VALVE ASSEMBLY



61500-2900 Rev F

Item No.	QTY	Part No.	Description
1	1	41428-01	Valve Body, 2900s, Machd, NPT U.S. Tap
		41428-09	Valve Body, 2900s, Machined, w/Soft Water Adapter
		41428-01NP	Valve Body, 2900s, MCHD, NPT, NP, U.S. Tap, Top Coll
		41428-03	Valve Body, 2900s, MACHD, NPT, U.S. Tap, Aux Tap, Top Coll
		41428-03NP	Valve Body, 2900s, MCHD, NPT, NP, U.S. Tap, Aux Tap, Top Coll
		41428-05	Valve Body, 2900s, NPT, U.S. Tap, SVO, Top Coll
		41428-07	Valve Body, 2900s, MACHD, NPT, U.S. Tap, Aux Tap, SVO, Top Coll
		41428-09	Valve Body, 2900s, MACHD, NPT, U.S. Tap, Soft ADAPT, Top Coll
		41428-09NP	Valve Body, 2900S, MCHD, NPT, NP, U.S. Tap, Soft ADAPT, Top Coll
		41428-11	Valve Body, 2900S, NPT, U.S. Tap, Aux Tap, SFT ADPT, Top Coll
		41428-13	Valve Body, 2900S, MACHD, NPT, U.S. Tap, SVO, Soft ADAPT, Top Coll
		41428-15	Valve Body, 2900S, MACHD, NPT, U.S. Tap, SVO, SFT ADPT, AX TP Top
		41428-21	Valve Body, 2900S, MACHD, BSP, Metric Tap, Top Coll
		41428-21NP	Valve Body, 2900S, MCHD, BSP, NP, Metric Tap, Top Coll
2	1	10757	Spacer, End
		10757B	Spacer, End, Brass, HW
3	7	10545	Seal, Piston
		10545-01	Seal, Piston, Viton
		10545-02	Seal, Piston, Silicone

CONTROL VALVE ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
4	6	11451	Spacer, 12 Hole
		16589	Spacer, Hot Water
5	1	14451	Piston, 2750
		19454*	Piston, 2750, Upflow
6	1	41424	Rod, Piston, 2900S, Upper
7	1	41131	Plug, End
	1	10212	Plug, End, 1500/2750, Brass
8	1	10909	Pin, Link
9	1	10209	Quad Ring,-010
10	1	40078	O-ring, 28mm X 2mm
		10234-01	O-ring, -024, Hot Water
11	4	11720	Seal, Piston, 2900/3150
		10545-02	Seal, Piston, Silicone
12	2	10369	Spacer, 2-inch, 2900/3150
		14241-01	Spacer, Hot Water
13	1	14753	Spacer, 2900
		16589	Spacer, Hot Water
14	1	14757	Piston, HWBP
		14752	Piston, 2900, NHWBP
15	1	14818	Ring, Piston Rod, Snap
16	1	14758	Rod, Piston, 2900
17	1	14922	O-ring, -035, Piston
18	1	14926	Quad Ring, -012
19	1	14754-00	End Plug Assy, 2900
		14754-01	Plug, End, White, Machined
		14754-10	End Plug Assembly, 2900/2930, NHWBP
		19276-01	End Plug Assembly, 2900S, Brass, HW
		41427-01	Plug, End, 2900S, Lower, White
		41427-11	Plug, End, 2900S, Lower, Black
20	1	14813	Pin, Spring, Connecting Rod
21	1	13575	O-ring, -240
		15210	O-ring, -343, Park Tank
22	1	13577	O-ring, -226
23	1	61525	Softwater Adapter Kit, 2900S
25	2	19925	Gasket, Injector Body, 1700
31	1	11893	Cap, Injector, Stainless Steel
32	2	15137	Screw, Hex Wsh Mach, 10 - 24 x 3/8
33		61540	Piston Assy, 2900S Downflow, Upper
		61540-01	Piston Assy, 2900S, Downflow, Upper, Hot Water
		61545	Piston Assy, 2900S, Upflow, Upper
		61545-01	Piston Assy, 2900S, Upflow, Upper, Hot Water
34		61530	Seal & Spacer Kit, 2900s, Upper
		61530-01	Seal & Spacer Kit, 2900S, Upper, Hot Water
		61530-02	Seal & Spacer Kit, 2900S, Upper, VITON, Chemical Resistent
35		60128	Seal & Spacer Kit, 2900, Lower
		60128-01	Seal & Spacer Kit, 2900, Lower, Hot Water
		60128-10	Seal & Spacer Kit, 2900, Lower, Silicone
36		61550	Piston Assy, 2900S, HWBP, Lower
		61550-03	Piston Assy, 2900S, HWBP, Lower, Hot Water
		61555	Piston Assy, 2900S, NHWBP, Lower
		61555-03	Piston Assy, 2900S, NHWBP, Lower, Hot Water

Not Shown:

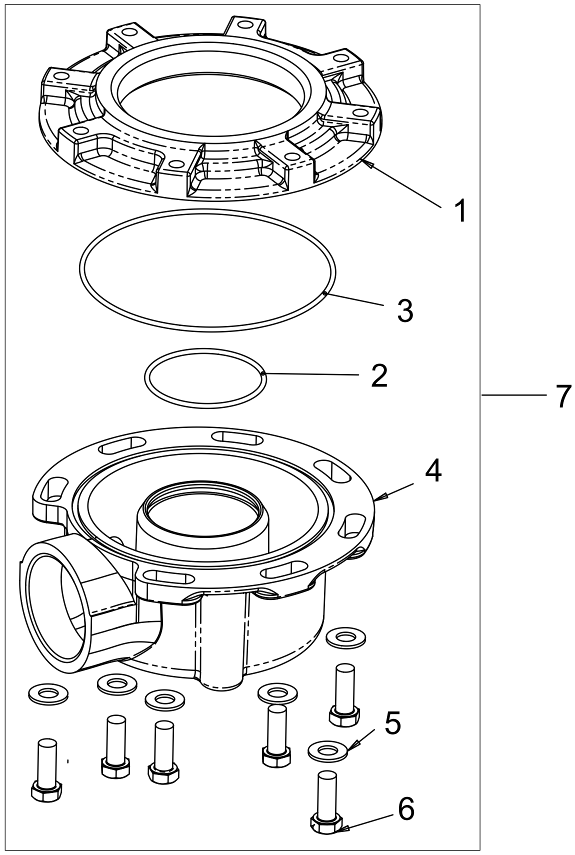
Item No.	QTY	Part No.	Description
		60366-00	DLFC, 1-inch F x 3/4-inch F, NPT, No Button
		60366-06	DLFC, 1-inch F x 3/4-inch F, NPT, 0.6 gpm
		60366-08	DLFC, 1-inch F x 3/4-inch F, NPT, 0.8 gpm
		60366-10	DLFC, 1-inch F x 3/4-inch F, NPT, 1.0 gpm
		60366-12	DLFC, 1-inch F x 3/4-inch F, NPT, 1.2 gpm
		60366-13	DLFC, 1-inch F x 3/4-inch F, NPT, 1.3 gpm
		60366-15	DLFC, 1-inch F x 3/4-inch F, NPT, 1.5 gpm
		60366-17	DLFC, 1-inch F x 3/4-inch F, NPT, 1.7 gpm
		60366-20	DLFC, 1-inch F x 3/4-inch F, NPT, 2.0 gpm
		60366-24	DLFC, 1-inch F x 3/4-inch F, NPT, 2.4 gpm
		60366-30	DLFC, 1-inch F x 3/4-inch F, NPT, 3.0 gpm
		60366-35	DLFC, 1-inch F x 3/4-inch F, NPT, 3.5 gpm
		60366-40	DLFC, 1-inch F x 3/4-inch F, NPT, 4.0 gpm

CONTROL VALVE ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
	....	60366-45	DLFC, 1-inch F x 3/4-inch F, NPT, 4.5 gpm
	....	60366-50	DLFC, 1-inch F x 3/4-inch F, NPT, 5.0 gpm
	....	60366-60	DLFC, 1-inch F x 3/4-inch F, NPT, 6.0 gpm
	....	60366-70	DLFC, 1-inch F x 3/4-inch F, NPT, 7.0 gpm
	....	60708-00	DLFC, 1-inch F x 3/4-inch F, NPT, No Button
	....	60708-8.0	DLFC, 1-inch F x 3/4-inch F, NPT, 8.0 gpm
	....	60708-9.0	DLFC, 1-inch F x 3/4-inch F, NPT, 9.0 gpm
	....	60708-10	DLFC, 1-inch F x 3/4-inch F, NPT, 10.0 gpm
	....	60708-12	DLFC, 1-inch F x 3/4-inch F, NPT, 12.0 gpm
	....	60708-15	DLFC, 1-inch F x 3/4-inch F, NPT, 15.0 gpm
	....	60708-20	DLFC, 1-inch F x 3/4-inch F, NPT, 20.0 gpm
	....	60708-25	DLFC, 1-inch F x 3/4-inch F, NPT, 25.0 gpm
	....	60721-00	DLFC, 1-inch F x 1-inch F, NPT, No Button
	....	60721-06	DLFC, 1-inch F x 1-inch F, NPT, 0.06 gpm
	....	60721-08	DLFC, 1-inch F x 1-inch F, NPT, 0.08 gpm
	....	60721-10	DLFC, 1-inch F x 1-inch F, NPT, 1.0 gpm
	....	60721-12	DLFC, 1-inch F x 1-inch F, NPT, 1.2 gpm
	....	60721-13	DLFC, 1-inch F x 1-inch F, NPT, 1.3 gpm
	....	60721-15	DLFC, 1-inch F x 1-inch F, NPT, 1.5 gpm
	....	60721-00	DLFC, 1-inch F x 1-inch F, NPTF, No Button
	....	60721-17	DLFC, 1-inch F x 1-inch F, NPTF, 1.7 gpm
	....	60721-20	DLFC, 1-inch F x 1-inch F, NPTF, 2.0 gpm
	....	60721-24	DLFC, 1-inch F x 1-inch F, NPTF, 2.4 gpm
	....	60721-30	DLFC, 1-inch F x 1-inch F, NPTF, 3.0 gpm
	....	60721-35	DLFC, 1-inch F x 1-inch F, NPTF, 3.5 gpm
	....	60721-40	DLFC, 1-inch F x 1-inch F, NPTF, 4.0 gpm
	....	60721-45	DLFC, 1-inch F x 1-inch F, NPTF, 4.5 gpm
	....	60721-50	DLFC, 1-inch F x 1-inch F, NPTF, 5.0 gpm
	....	60721-60	DLFC, 1-inch F x 1-inch F, NPTF, 6.0 gpm
	....	60721-70	DLFC, 1-inch F x 1-inch F, NPTF, 7.0 gpm
	....	60702-00	DLFC, 1-inch M x 1-inch F, NPT, Brass, No Button
	....	60702-8.0	DLFC, 1-inch M x 1-inch F, NPT, 8.0 gpm
	....	60702-9.0	DLFC, 1-inch M x 1-inch F, NPT, 9.0 gpm
	....	60702-10	DLFC, 1-inch M x 1-inch F, NPT, 10 gpm
	....	60702-12	DLFC, 1-inch M x 1-inch F, NPT, 12 gpm
	....	60702-15	DLFC, 1-inch M x 1-inch F, NPT, 15 gpm
	....	60702-20	DLFC, 1-inch M x 1-inch F, NPT, 20 gpm
	....	60702-25	DLFC, 1-inch M x 1-inch F, NPT, 25 gpm
	....	13640	Flow Control, Dole, 30 gpm
	....	60711-35	DLFC, 2-inch NPT, 35 gpm

*Upflow Only

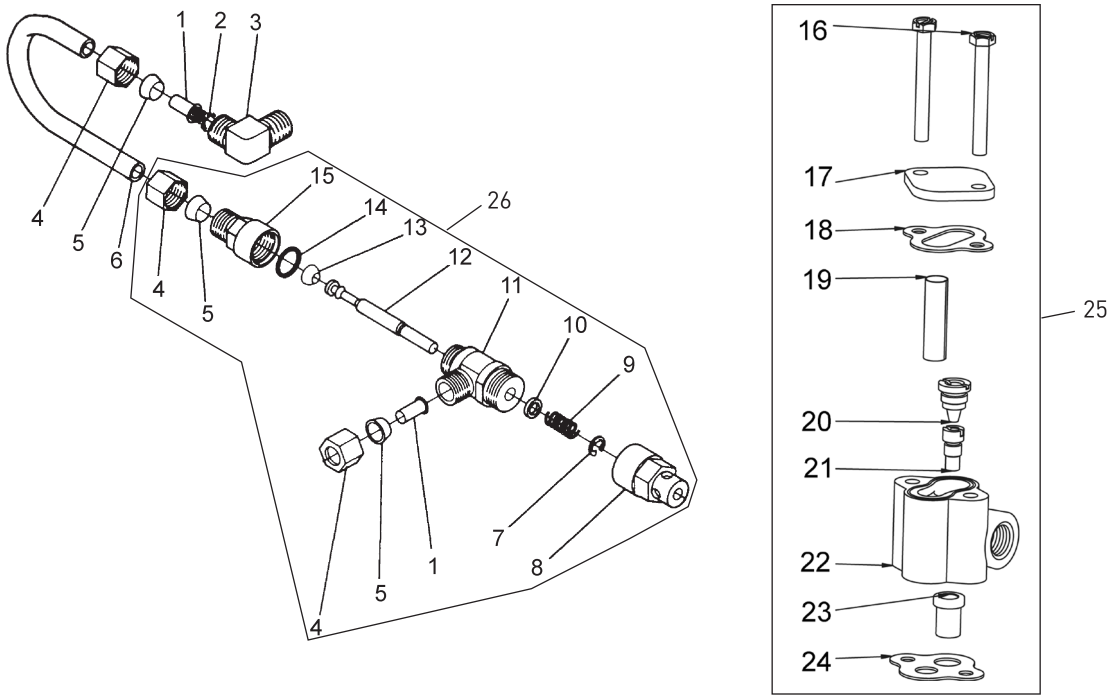
CONTROL VALVE SIDE MOUNT ADAPTER



61415 Rev B

Item No.	QTY	Part No.	Description
1	1	40316	Adapter, Sidemount
2	1	40372	O-ring - 142
3	1	40368	O-ring - 160, Sidemount, Flange
4	1	40310	Base, 2850/2900/3930, Rotating
5	7	40375	Washer, Flat, 3/8, Type A, N-SERS
6	7	19768	Screw, Hex Hd, 3/8 - 16 x 1, Cap 18-8
7	1	61415	Adapter Assy, Sidemount 2850/2900/2930
		61415NP	Adapter Assy, Sidemount, NP 2850/2900/2930
		61415-20	Adapter Assy, Sidemount, BSP/MTC 2850/2900/2930
		61415-20NP	Adapter Assy, Sidemount, BSP/NP 2850/2900/2930

1600 SERIES BRINE SYSTEM



60029 Rev C

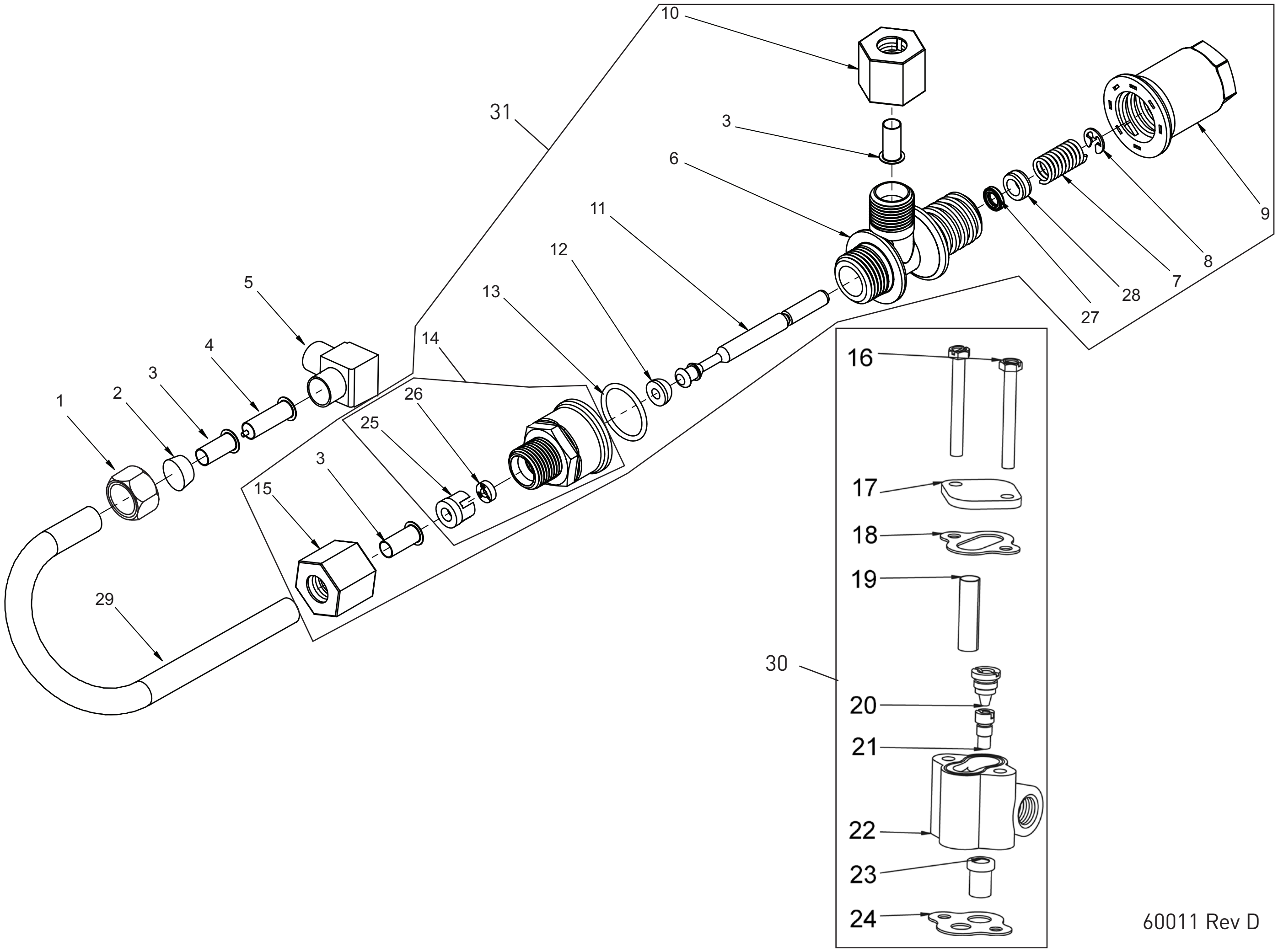
Item No.	QTY	Part No.	Description
1	2	10332	Fitting, Insert, 3/8
2	1	12767	Screen, Brine
3	1	10328	Fitting, Elbow, 90 Deg. 1/4 PT x 3/8 Tube
4	3	10329	Fitting, Tube, 3/8 Nut, Brass
5	3	10330	Fitting, Sleeve, 3/8 Celcon
6	1	16508	Tube, Brine, 1600, PVC
	1	16508-01	Tube, Brine Valve, 2850/2900s
	1	12774	Tube, Brine Valve, 1500
	1	40027	Tube, Brine Valve, 2510
	1	15221	Tube, Brine Valve, 2750/2900
	1	42184	Tube, Brine Valve, 2850s
	1	41683*	Tube, Brine Valve, UF, 1600/1650
7	1	10250	Ring, Retaining
8	1	11749	Guide, Brine Valve Stem
9	1	10249	Spring, Brine Valve
10	1	12550	Quad Ring, -009
11	1	12748	Brine Valve Body Assy, 1600 w/Quad Ring
12	1	12552-02	Brine Valve Stem, 1600, with Seat
13	1	12626	Seat, Brine Valve
14	1	11982	O-ring, -016
15	1	60020-25	BLFC, .25 GPM, 1600
	1	60020-50	BLFC, .50 GPM, 1600
	1	60020-100	BLFC, 1.0 GPM, 1600
16	2	10692	Screw, Slot Hex Hd, 10 - 24X 18-8 Stainless Steel
17	1	11893	Cap, Injector, SS
18	1	10229	Gasket, Injector Cap, 1600
19	1	10227	Screen, Injector
20	1	10913-000	Nozzle, Injector #000, Brown
		10913-00	Nozzle, Injector #00, Violet
		10913-0	Nozzle, Injector #0, Red
		10913-1	Nozzle, Injector #1, White
		10913-2	Nozzle, Injector #2, Blue
		10913-3	Nozzle, Injector #3, Yellow
		10913-4	Nozzle, Injector #4, Green
		12973-0	Nozzle, Injector #0, PVC, Grey
		12973-1	Nozzle, Injector #1, PVC, Grey
		12973-2	Nozzle, Injector #2, PVC, Grey
		12973-3	Nozzle, Injector #3, PVC, Grey
		12973-4	Nozzle, Injector #4, PVC, Grey
		10225-0	Nozzle, Injector #0, Stainless Steel
		10225-1	Nozzle, Injector #1, Stainless Steel
		10225-2	Nozzle, Injector #2, Stainless Steel
		10225-3	Nozzle, Injector #3, Stainless Steel
		10225-4	Nozzle, Injector #4, Stainless Steel

1600 SERIES BRINE SYSTEM *CONTINUED*

Item No.	QTY	Part No.	Description
21	1	10914-000	Throat, Injector #000, Brown
		10914-00	Throat, Injector #00, Violet
		10914-0	Throat, Injector #0, Red
		10914-1	Throat, Injector #1, White
		10914-2	Throat, Injector #2, Blue
		10914-3	Throat, Injector #3, Yellow
		10914-4	Throat, Injector #4, Green
		12974-0	Throat, Injector #0, PVC, Grey
		12974-1	Throat, Injector #1, PVC, Grey
		12974-2	Throat, Injector #2, PVC, Grey
		12974-3	Throat, Injector #3, PVC, Grey
		12974-4	Throat, Injector #4, PVC, Grey
		10226-0	Throat, Injector #0, Stainless Steel
		10226-1	Throat, Injector #1, Stainless Steel
		10226-2	Throat, Injector #2, Stainless Steel
		10226-3	Throat, Injector #3, Stainless Steel
		10226-4	Throat, Injector #4, Stainless Steel
22	1	17776	Body, Injector, 1600
	1	17776-02*	Body, Injector, 1600 Upflow
23	1	16221	Disperser, Air
24	1	14805	Gasket, Injector Body, 1600/1700
25		60480-01	Injector Assy, 1600, #1, Plastic
		60480-02	Injector Assy, 1600, #2, Plastic
		60480-03	Injector Assy, 1600, #3, Plastic
		60480-04	Injector Assy, 1600, #4, Plastic
		60481-21	Injector Assy, 1600, #1, S.S. Brass
		60481-22	Injector Assy, 1600, #2, S.S. Brass
		60481-23	Injector Assy, 1600, #3, S.S. Brass
		60080-11	Injector Assy, 1600, #1, PVC
		60080-12	Injector Assy, 1600, #2, PVC
		60080-14	Injector Assy, 1600, #4, PVC
		60485-003	Injector Assy, 2900/1600, Upflow, #0, w/Reg Cap, 20 psi
		60485-012	Injector Assy, 2900/1600, Upflow, #1, w/Reg Cap, 20 psi
		60485-022	Injector Assy, 2900/1600, Upflow, #2, w/Reg Cap, 20 psi
		60485-032	Injector Assy, 2900/1600, Upflow, #3, w/Reg Cap, 20 psi
		60485-043	Injector Assy, 2900/1600, Upflow, #4, w/Reg Cap, 20 psi
26		60029-010	Brine Valve, 1600, 0.25 gpm
		60029-020	Brine Valve, 1600, 0.50 gpm
		60029-030	Brine Valve, 1600, 1.0 gpm

*Upflow Only

1650 BRINE SYSTEM ASSEMBLY



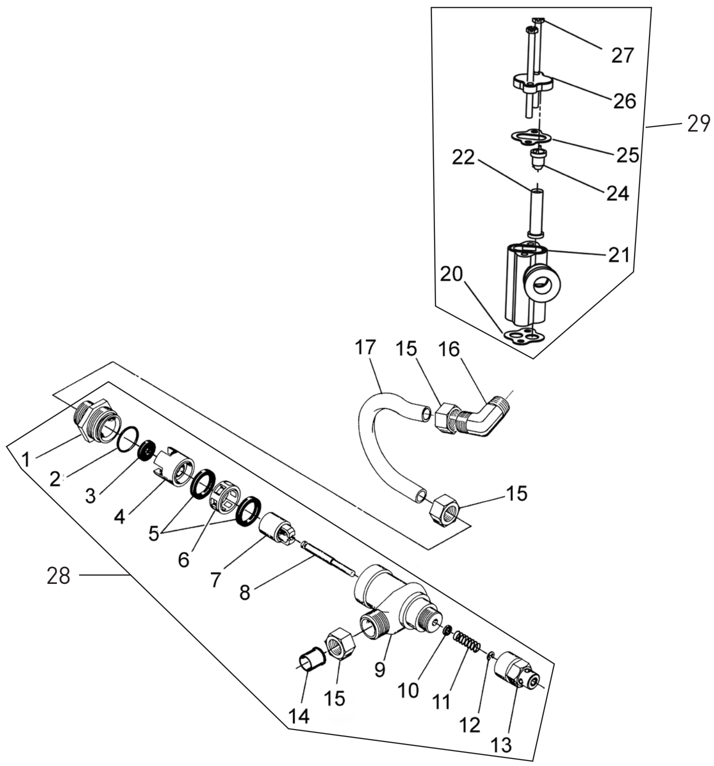
Item No.	QTY	Part No.	Description
1	1	10329	Fitting, Tube, 3/8 Nut, Brass
2	1	10330	Fitting, Sleeve, 3/8 Celcon
3	3	10332	Fitting, Insert, 3/8
4	1	12767	Screen, Brine
5	1	10328	Fitting, Elbow, 90 Deg 1/4 NPT x 3/8T
6	1	17884	Brine Valve Body Assy, 1650
7	1	10249	Spring, Brine Valve
8	1	10250	Ring, Retaining
9	1	17906	Guide, Brine Valve Stem
10	1	19625	Nut Assy, 3/8-inch, Plastic
11	1	12552-02	Brine Valve Stem, 1600
12	1	12626	Seat, Brine Valve
13	1	16924	O-ring, -018
14	1	60010-25	BLFC, 1650, .25 GPM, Plastic (Includes items 25 and 26)
	1	60010-50	BLFC, 1650, .50 GPM, Plastic
	1	60010-100	BLFC, 1650, 1.0 GPM, Plastic
15	1	19625	Nut Assy, 3/8-inch, Plastic
16	2	10692	Screw, Slot Hex Hd, 10 - 24X 18-8 Stainless Steel
17	1	11893	Cap, Injector, Stainless Steel
18	1	10229	Gasket, Injector Cap, 1600
19	1	10227	Screen, Injector
20	1	10913-000	Nozzle, Injector #000, Brown
		10913-00	Nozzle, Injector #00, Violet
		10913-0	Nozzle, Injector #0, Red
		10913-1	Nozzle, Injector #1, White
		10913-2	Nozzle, Injector #2, Blue
		10913-3	Nozzle, Injector #3, Yellow
		10913-4	Nozzle, Injector #4, Green
		12973-0	Nozzle, Injector #0, PVC, Grey
		12973-1	Nozzle, Injector #1, PVC, Grey
		12973-2	Nozzle, Injector #2, PVC, Grey

1650 BRINE SYSTEM ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
		12973-3	Nozzle, Injector #3, PVC, Grey
		12973-4	Nozzle, Injector #4, PVC, Grey
		10225-0	Nozzle, Injector #0, Stainless Steel
		10225-1	Nozzle, Injector #1, Stainless Steel
		10225-2	Nozzle, Injector #2, Stainless Steel
		10225-3	Nozzle, Injector #3, Stainless Steel
		10225-4	Nozzle, Injector #4, Stainless Steel
21	1	10914-000	Throat, Injector #000, Brown
		10914-00	Throat, Injector #00, Violet
		10914-0	Throat, Injector #0, Red
		10914-1	Throat, Injector #1, White
		10914-2	Throat, Injector #2, Blue
		10914-3	Throat, Injector #3, Yellow
		10914-4	Throat, Injector #4, Green
		12974-0	Throat, Injector #0, PVC, Grey
		12974-1	Throat, Injector #1, PVC, Grey
		12974-2	Throat, Injector #2, PVC, Grey
		12974-3	Throat, Injector #3, PVC, Grey
		12974-4	Throat, Injector #4, PVC, Grey
		10226-0	Throat, Injector #0, Stainless Steel
		10226-1	Throat, Injector #1, Stainless Steel
		10226-2	Throat, Injector #2, Stainless Steel
		10226-3	Throat, Injector #3, Stainless Steel
		10226-4	Throat, Injector #4, Stainless Steel
22	1	17776	Body, Injector, 1600
	1	17776-02*	Body, Injector, 1600 Upflow
23	1	16221	Disperser, Air
24	1	14805	Gasket, Injector Body, 1600/1700
25	1	12098	Retainer, Flow Control
26	1	12095	Washer, Flow Control .50 GPM
	1	12094	Washer, Flow Control .25 GPM
	1	12097	Washer, Flow Control 1.0 GPM
27	1	12550	Quad Ring -009
	1	12550-01	Quad Ring -009 560CD
28	1	17908	Sleeve, Brine Valve Stem
29	1	16508-01	Tube, Brine Valve, 2850/1600
	1	40027	Tube, Brine Valve, 2510
	1	42184	Tube, Brine Valve, 2850s
	1	12774	Tube, Brine Valve, 1500
	1	15221	Tube, Brine Valve, 2750
	1	41683*	Tube, Brine Valve, UF, 1600/1650
30		60480-01	Injector Assy, 1600, #1, Plastic
		60480-02	Injector Assy, 1600, #2, Plastic
		60480-03	Injector Assy, 1600, #3, Plastic
		60480-04	Injector Assy, 1600, #4, Plastic
		60481-21	Injector Assy, 1600, #1, S.S. Brass
		60481-22	Injector Assy, 1600, #2, S.S. Brass
		60481-23	Injector Assy, 1600, #3, S.S. Brass
		60080-11	Injector Assy, 1600, #1, PVC
		60080-12	Injector Assy, 1600, #2, PVC
		60080-14	Injector Assy, 1600, #4, PVC
		60485-003	Injector Assy, 2900/1600, Upflow, #0, w/Reg Cap, 20 psi
		60485-012	Injector Assy, 2900/1600, Upflow, #1, w/Reg Cap, 20 psi
		60485-022	Injector Assy, 2900/1600, Upflow, #2, w/Reg Cap, 20 psi
		60485-032	Injector Assy, 2900/1600, Upflow, #3, w/Reg Cap, 20 psi
		60485-043	Injector Assy, 2900/1600, Upflow, #4, w/Reg Cap, 20 psi
31		60011-010	Brine Valve, 1650, 0.25 gpm
		60011-020	Brine Valve, 1650, 0.50 gpm
		60011-030	Brine Valve, 1650, 1.0 gpm

*Upflow Only

1700 BRINE SYSTEM ASSEMBLY



60034 Rev D

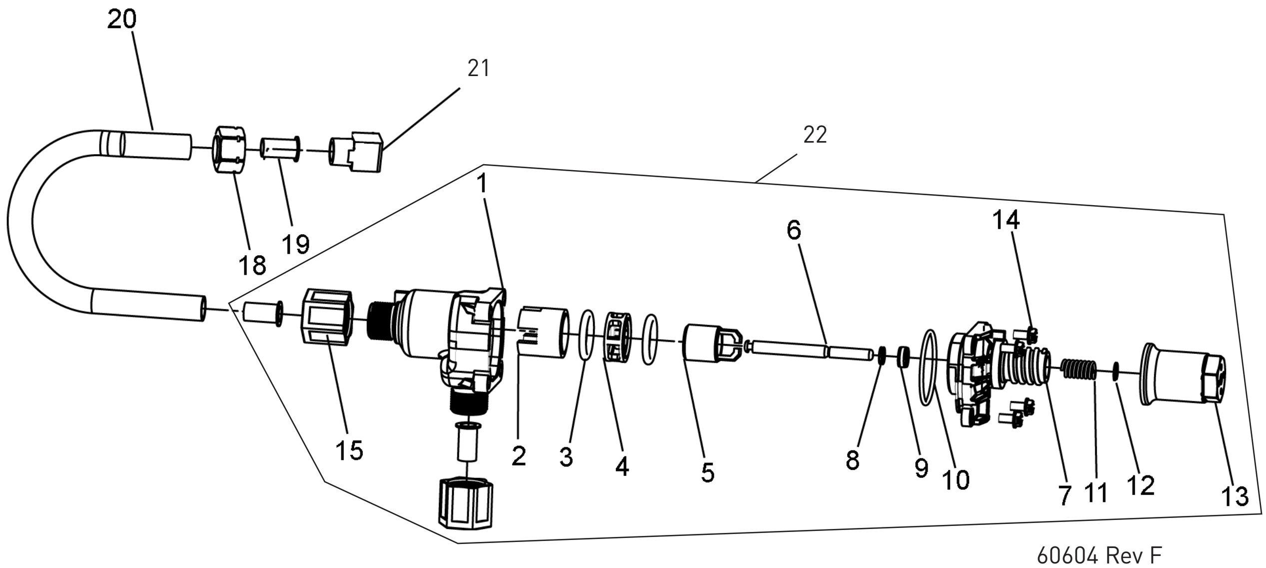
1700 BRINE SYSTEM ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
1	1	14792	Plug, End, Brine Valve
2	1	13201	Quad Ring, -020
3	1	12085	Washer, Flow, 1.2 GPM
	1	12086	Washer, Flow, 1.5 GPM
	1	12087	Washer, Flow, 2.0 GPM
	1	12088	Washer, Flow, 2.4 GPM
	1	12089	Washer, Flow, 3.0 GPM
	1	12090	Washer, Flow, 3.5 GPM
	1	12091	Washer, Flow, 4.0 GPM
	1	12092	Washer, Flow, 5.0 GPM
4	1	14785	Retainer, Flow Control
5	3	14811	O-ring, -210, 560CD, Brine
6	1	14798	Spacer, 1700, Brine
7	1	14795	Piston, Brine Valve
8	1	14797	Brine Valve Stem
9	1	14790	Brine Valve Body
10	1	12550	Quad Ring, -009
11	1	15310	Spring, Brine Valve
12	1	10250	Retaining Ring
13	1	15517	Guide, Stem
14	1	15415	Fitting, Insert, 1/2-inch, Tube
15	3	15414	Nut, 2900, w/Sleeve
16	1	15413	Fitting, Elbow, Male, 1/2T x 3/8 NPT
17	1	15416	Tube, Brine, 2900/2750
	1	16460	Tube, Brine, 2850/2900s
	1	41447*	Tube, Brine, 2900s, U/F
	1	42183	Tube, Brine, 1700, 2850s
20	1	14805	Gasket, Injector Body 1600/1700
21	1	17777	Body, Injector, 1700
	1	17777-02*	Body, Injector, 1700 U/F
22	1	14802-03c	Throat, Injector, #3c, Yellow
		14802-04c	Throat, Injector, #4c, Green
		14802-05c	Throat, Injector, #5c, White
		14802-06c	Throat, Injector, #6c, Red
24		14801-03c	Nozzle, Injector, #3c, Yellow
		14801-04c	Nozzle, Injector, #4c, Green
		14801-05c	Nozzle, Injector, #5c, White
		14801-06c	Nozzle, Injector, #6c, Red
25	1	10229	Gasket, Injector Cap, 1600
26	1	11893	Cap, Injector, Stainless Steel
	1	10228	Cap, Injector
27	2	14804	Screw, Hex Hd Mach, 10 - 24 x 2-3/4-inch 18-8 Stainless Steel
28	1	60034-00	Brine Valve, 1700, Blank
		60034-10	Brine Valve, 1700, 1.0 gpm
		60034-12	Brine Valve, 1700, 1.2 gpm
		60034-15	Brine Valve, 1700, 1.5 gpm
		60034-20	Brine Valve, 1700, 2.0 gpm
		60034-24	Brine Valve, 1700, 2.4 gpm
		60034-30	Brine Valve, 1700, 3.0 gpm
		60034-40	Brine Valve, 1700, 4.0 gpm
		60034-50	Brine Valve, 1700, 5.0 gpm
29	1	60381-03	Injector Assy, 1700, #3c, Complete
		60381-04	Injector Assy, 1700, #4c, Complete
		60381-05	Injector Assy, 1700, #5c, Complete
		60381-06	Injector Assy, 1700, #6c, Complete
Not Shown:			
	1	16974	Fitting, Plastic, Female, 3/4 x 3/4 Slip
	1	17996	Disperser, Air, Injector

*Upflow Only

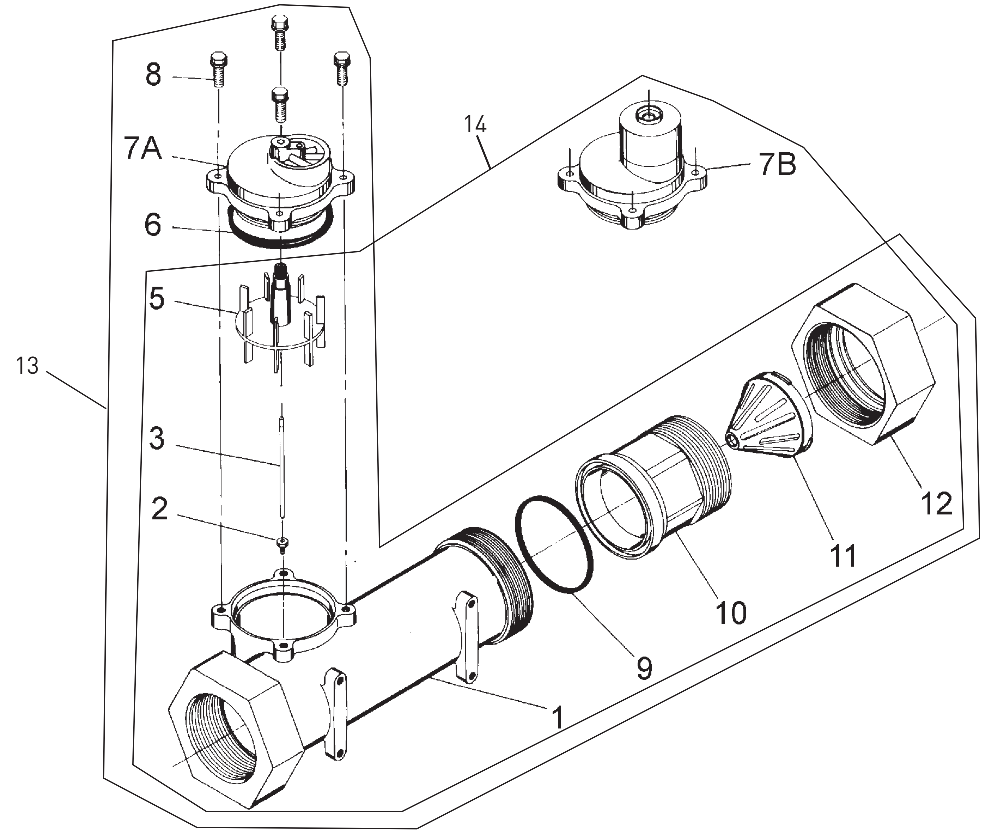
NOTE: Item number 26 (11893) is used on injector sizes 2 through 5C. Part number 10228 is used on injector sizes 6C.

1710 BRINE SYSTEM ASSEMBLY



Item No.	QTY	Part No.	Description
1	1	41202	Brine Valve, 1700, Plastic, Top
2	1	14785-01	Retainer, Flow Control
3	1	14811	O-Ring, -210, 560CD, Brine
4	1	14798	Spacer, 1700, Brine
5	1	14795	Piston, Brine Valve
6	1	41203	Stem, Brine, 1710, Plastic, 2900
7	1	41201	Brine Valve, 1700, Plastic, Bottom
8	5	17908	Sleeve, Brine Valve Stem
9	1	12550	Quad Ring, -009
10	3	41547	O-Ring, 2mmx35mm
11	2	15310	Spring, Brine Valve
12	2	10250	Ring, Retaining
13	1	17906	Guide, Brine Valve Stem
14	2	14202-01	Screw, Hex Wsh Mach, 8-32 X 5/16
15	2	41056	Nut Assembly, 1/2-inch Plastic
18	1	15414	Nut, 2900, w/Sleeve
19	1	15415	Fitting, Insert, 1/2-inch, Tube
20	1	16460	Tube, Brine, 2850, 2900s
	1	42183	Tube, Brine, 1700/2850s
	1	15416	Tube, Brine, 2900/2750
	1	41447*	Tube, Brine, 2900s U/F
21	1	15413	Fitting, Elbow, Male, 1/2T X 3/8NPT
22		60605-00	Brine Valve, 1710, 2750, Blank
		60605-10	Brine Valve, 1710, 2750, 1.0 gpm
		60605-12	Brine Valve, 1710, 2750, 1.2 gpm
		60605-15	Brine Valve, 1710, 2750, 1.5 gpm
		60605-20	Brine Valve, 1710, 2750, 2.0 gpm
		60605-24	Brine Valve, 1710, 2750, 2.4 gpm
		60605-30	Brine Valve, 1710, 2750, 3.0 gpm
		60605-40	Brine Valve, 1710, 2750, 4.0 gpm
		60605-50	Brine Valve, 1710, 2750, 5.0 gpm
Not Shown			
	1	19151	Washer, Flow, 1.0 gpm
	1	17996	Disperser, Air, Injector
	1	414193-00	Label, Blank, BLFC, 1710

2-INCH BRASS METER ASSEMBLY

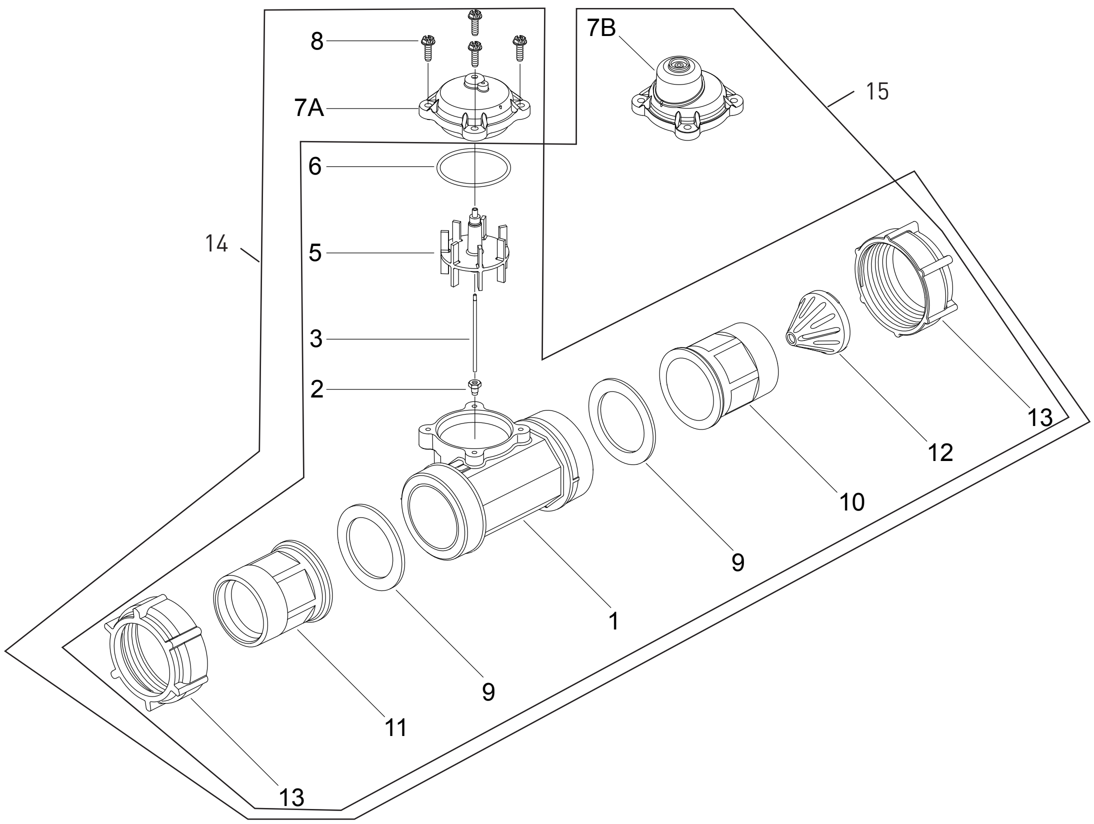


Item No.	QTY	Part No.	Description
1	1	14456	Body, Meter, 2-inch
		14456-20	Body, Meter, 2-inch, BSP, Metric
2	1	15532	Seat, Impeller Shaft, Hex
3	1	15432	Shaft
5	1	15374	Impeller Assy, 2-inch Meter
6	1	13847	O-ring, -137, Std/560CD, Meter
7A	1	14038	Meter Cap Assembly, Std, Plastic
7B	1	15150	Meter Cap Assembly, 3/4-inch to 2-inch, Ext Plastic, Pdl
8	4	12112	Screw, Hex Hd Mach, 10-24 x 1/2 18-8 Stainless Steel
		15886	Screw, Hex Hd, M5 x 12 SS, Metric
9	1	14679	O-ring, -227, Meter
10	1	14568	Fitting, Nipple, 2-inch
		14568-10	Fitting, Nipple, 2-inch BSP, Brass
11	1	14680	Flow Straightener
12	1	14569	Nut, 2900 Meter
13			Meter Assy, 2-inch Inline, NPT, STD, Brass, Paddlewheel
			Meter Assy, 2-inch Inline, BSP, STD, Brass, Paddlewheel
14			Meter Assy, 2-inch Inline, NPT, EXT, Brass Paddlewheel
			Meter Assy, 2-inch Inline, BSP, EXT, Brass, Paddlewheel

Not Shown

Item No.	QTY	Part No.	Description
		61439	Meter Sleeve w/O-rings, 1-1/2 inch

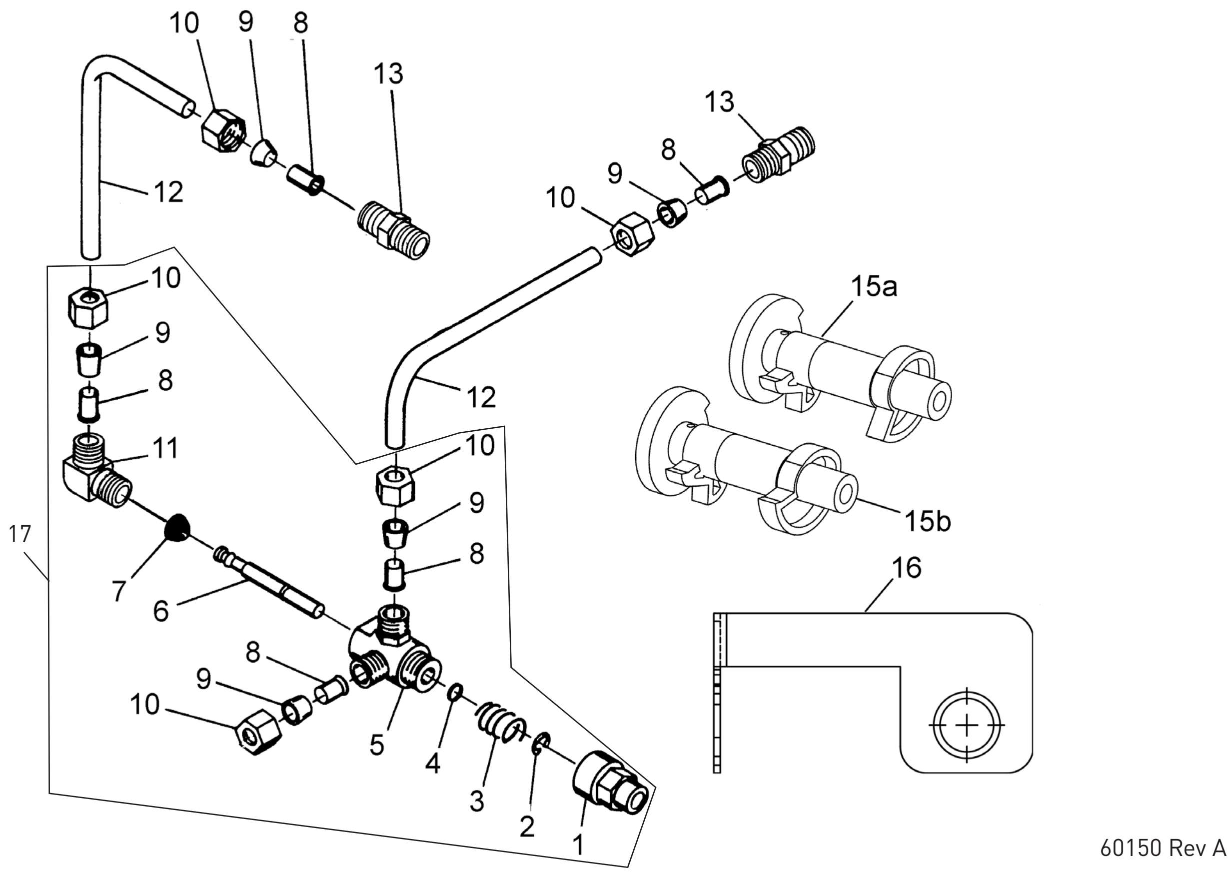
2-INCH PLASTIC METER ASSEMBLY



Item No.	QTY	Part No.	Description
1	1	17689	Body, Meter, 2-inch Plastic w/Impeller Shaft Seat
2	1	15532	Seat, Impeller Shaft, Hex
3	1	15432	Shaft, Impeller, Stainless Steel
5	1	15374	Impeller Assy, 2-inch Meter
6	1	13847	O-ring, -137, Std/560CD, Meter
7A	1	14038	Meter Cap Assembly
7B		15150	Meter Cap Assembly, EXT
8	4	12473	Screw, Hex Wsh, 10-24 x 5/8 18-8 Stainless Steel
9	2	40666	Seal, Face, 2-inch, Plastic Meter
10A	1	17987-001	Fitting, Nipple, 2-inch, Plastic, NPT, Machined, Flow Straightener
10B	1	17987-101	Fitting, Nipple, 2-inch, Plastic, BSP, Machined, Flow Straightener
11A	1	17987-000	Fitting, Nipple, 2-inch, Plastic, NPT
11B	1	17987-100	Fitting, Nipple, 2-inch, Plastic, BSP

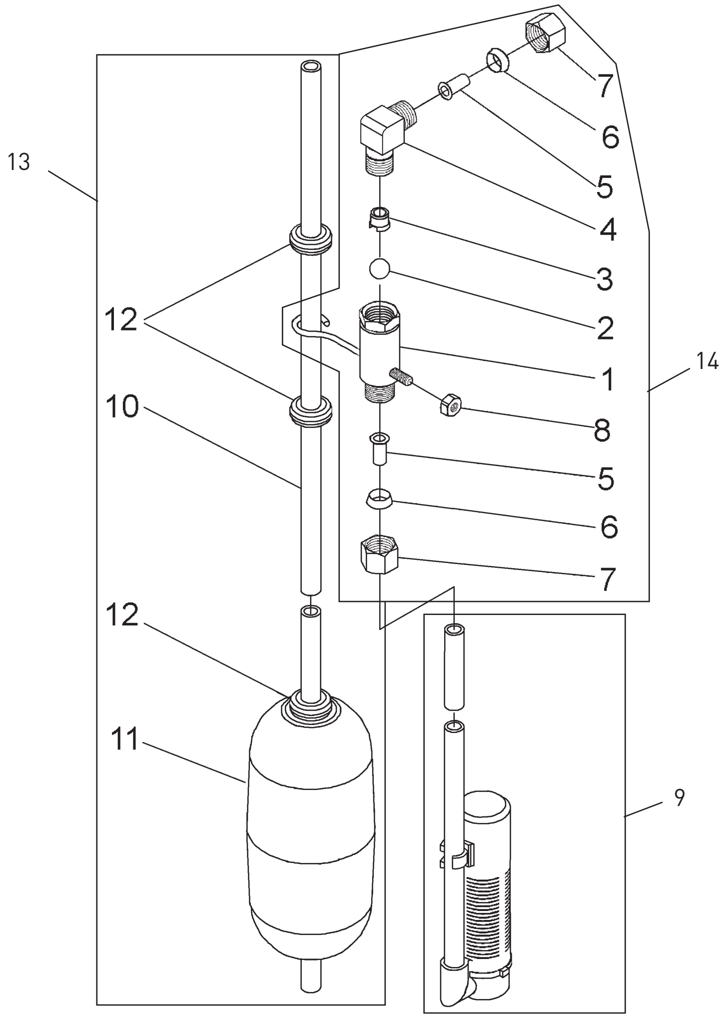
Item No.	QTY	Part No.	Description
12	1	14680	Flow Straightener
13	2	17988	Nut, 2-inch Meter
14		60620	Meter Assy, 2-inch, Inline, NPT, STD, Plastic, w/Plastic Nipples, Paddlewheel
		60620-01	Meter Assy, 2-inch, Inline, NPT, STD, Plastic, w/Brass Nipples, Paddlewheel
		60620-10	Meter Assy, 2-inch Inline, BSP, STD, Plastic, Plastic Nipples, Paddlewheel
		60620-11	Meter Assy, 2-inch, Inline, BSP, STD, Plastic, Brass Nipples, Paddlewheel
15		60621	Meter Assy, 2-inch, Inline, NPT, EXT, Plastic, w/Plastic Nipples, Paddlewheel
		60621-01	Meter Assy, 2-inch, Inline, NPT, EXT, Plastic, w/Brass Nipples, Paddlewheel
		60621-10	Meter Assy, 2-inch Inline, BSP, EXT, Plastic, Plastic Nipples, Paddlewheel
		60621-11	Meter Assy, 2-inch, Inline, BSP, EXT, Plastic, Brass Nipples, Paddlewheel

1600 SERVICE VALVE OPERATOR (NEW STYLE)



Item No.	QTY	Part No.	Description
1	1	11749	Guide, Brine Valve Stem
2	1	10250	Ring, Retaining
3	1	10249	Spring, Brine Valve
4	1	12550	Quad Ring, -009
5	2	10785	SVO Body Assy Brass Valves
6	1	12552	Brine Valve Stem, 1600
7	1	12626	Seat, Brine Valve
8	5	10332	Fitting, Insert, 3/8-inch
9	5	10330	Fitting, Sleeve, 3/8-inch Celcon
10	5	10329	Fitting, Tube, 3/8 Nut, Brass
11	1	10328	Fitting, Elbow, 90 Deg 1/4 NPT x 3/8 Tube
12	2	12897	Tube, Fitting, 3/8 x 9 3/4
13	1	16730	Fitting, Male, 1/4 x 1
14	2	15415	Fitting, Insert, 1/2-inch Tube
15a	1	12472	Cam Assembly, Tri-Stack, After RR
15b	1	15770	Cam Assembly, Special Tri-Stack After Brine Fill
16	1	12114	Bracket, Motor Outboard, Coated
17	1	60150-01	Service Valve Operator Assembly, 1600, New Style, Item No's 1-11

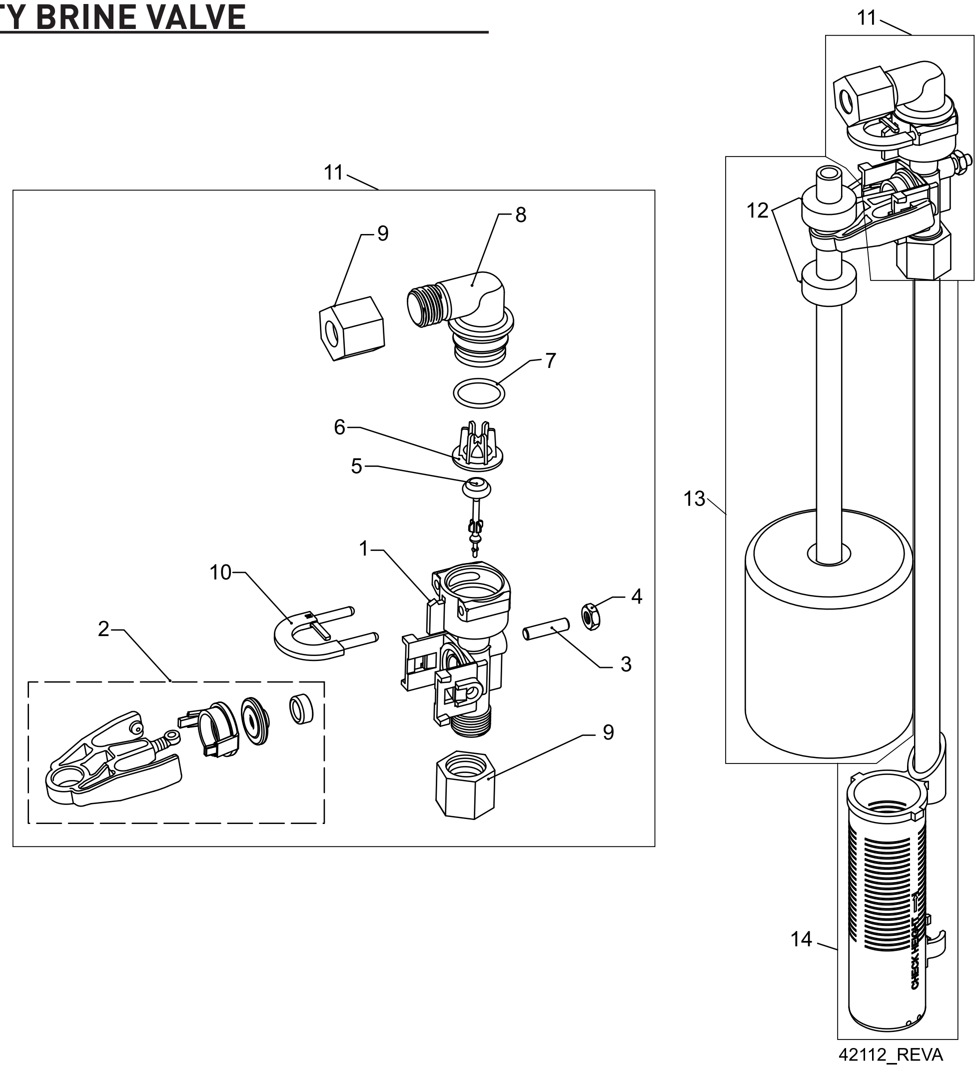
2300 SAFETY BRINE VALVE



60027 Rev D

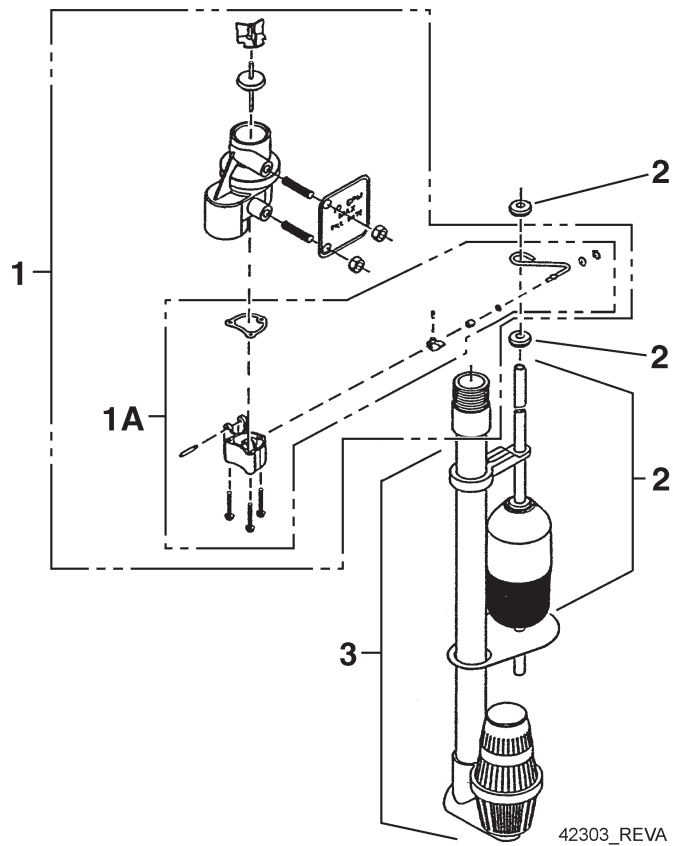
Item No.	QTY	Part No.	Description
1	1	60027-00	Safety Brine Valve, 2300, Less Elbow
2	1	10138	Ball, 3/8-inch, Brass
3	1	11566	Ball Stop, Slow Fill
4	1	10328	Fitting, Elbow, 90 Deg. 1/4 NPT x 3/8 Tube
5	1	10332	Fitting, Insert, 3/8
6	1	10330	Fitting, Sleeve, 3/8 Celcon
7	1	10329	Fitting, Tube, 3/8 Nut, Brass
8	1	10186	Nut, Hex, 10-32
9	1	60002-10	Air Check, #500, American Hydro
		60002-11.38	Air Check, #500, 11.38 inches Long
		60002-24	Air Check, #500, 24 inches Long
		60002-27	Air Check, #500, 27 inches Long
		60002-32	Air Check, #500, 32 inches Long
		60002-34	Air Check, #500, 34 inches Long
		60002-36	Air Check, #500, 36 inches Long
		60002-48	Air Check, #500, 48 inches Long
		60002-26.25	Air Check, #500, 26.25 inches Long
		60002-33.25	Air Check, #500, 33.25 inches Long
10	1	10149	Rod, Float, 30-inch
11	1	10700	Float Assy, White
12	3	10150	Grommet, .30 Dia
13	1	60028-30	Float Assy, 2300, 30-inch White
14	1	60027-FFA	Safety Brine Valve, 2300, Fitting Facing Arm
	1	60027-FFS	Safety Brine Valve, 2300 Fitting Facing Stud

2310 SAFETY BRINE VALVE



Item No.	QTY	Part No.	Description
1	1	19645	Body, Safety Brine Valve, 2310
2	1	19803	Safety Brine Valve Assy
3	1	19804	Screw, Sckt Hd, Set, 10-24 x .75
4	1	19805	Nut, Hex, 10-24, Nylon Black
5	1	19652-01	Poppet Assy, SBV w/O-ring
6	1	19649	Flow Dispenser
7	1	11183	O-ring, -017
8	1	19647	Elbow, Safety Brine Valve
9	2	19625	Nut Assy, 3/8-inch Plastic
10	1	18312	Retainer, Drain
11	1	60014	Safety Brine Valve Assy, 2310
12	2	10150	Grommet, .30 Dia
13	1	60068-8.06	Float Assy, 2310, w/8.06-inch Rod
		60068-10.5	Float Assy, 2310, w/10.5-inch Rod
		60068-11.5	Float Assy, 2310, w/11.5-inch Rod
		60068-20	Float Assy, 2310, w/20-inch Rod
		60068-30	Float Assy, 2310, w/30-inch Rod
14	1	60002-10	Air Check, #500, American Hydro
		60002-11.38	Air Check, #500, 11.38-inch Long
		60002-24	Air Check, #500, 24-inch Long
		60002-27	Air Check, #500, 27-inch Long
		60002-32	Air Check, #500, 32-inch Long
		60002-34	Air Check, #500, 34-inch Long
		60002-36	Air Check, #500, 36-inch Long
		60002-48	Air Check, #500, 48-inch Long
		60002-26.25	Air Check, #500, 26.25-inch Long
		60002-33.25	Air Check, #500, 33.25-inch Long

2350 SAFETY BRINE VALVE



Item No.	QTY	Part No.	Description
1	1	60038	Safety Brine Valve, 2350
1A	1	61024	Actuator Assy, 2350 Brine
2	1	60028-30	Float Assy, 2350, 30-inch Wht
	1	60026-30SAN	Float Assy, 2350, 30-inch Hot Water
3	1	60009-00	Air Check, #900, Commercial Less Fittings
	1	60009-01	Air Check, #900, Commercial, Hot Water Less Fittings
Not Shown			
	1	18603	Fitting Assy, 900 Air Check 2350
	1	18602	Fitting Assy, 900 Air Check

GENERAL SERVICE HINTS FOR METER CONTROL

Problem: Softener delivers hard water

Reason: Reserve capacity has been exceeded.

Correction: Check salt dosage requirements and reset program wheel to provide additional reserve.

Reason: Program wheel is not rotating with meter output.

Correction: Pull cable out of meter cover and rotate manually. Program wheel must move without binding and clutch must give positive clicks when program wheel strikes regeneration stop. If it does not, replace timer.

Reason: Meter is not measuring flow.

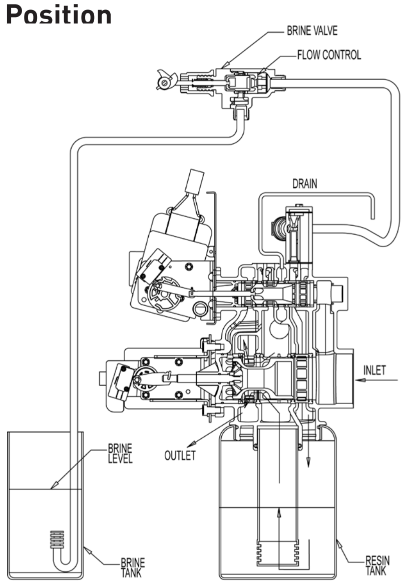
Correction: Check meter with meter checker.

TROUBLESHOOTING

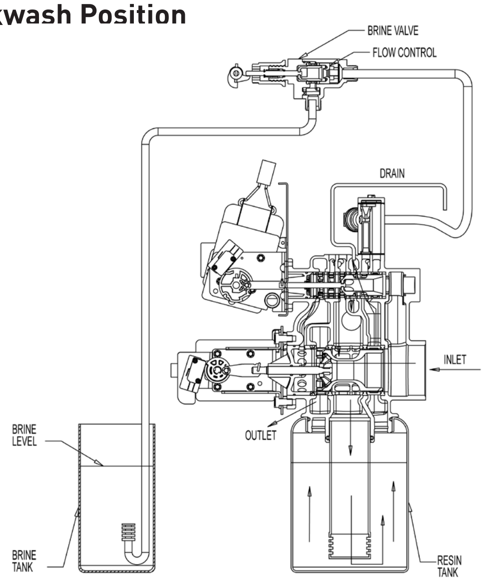
Problem	Cause	Correction
Water conditioner fails to regenerate.	Electrical service to unit has been interrupted	Assure permanent electrical service (check fuse, plug, pull chain, or switch)
	Timer is defective.	Replace timer.
	Power failure.	Reset time of day.
Hard water.	By-pass valve is open.	Close by-pass valve.
	No salt is in brine tank.	Add salt to brine tank and maintain salt level above water level.
	Injector screen plugged.	Clean injector screen.
	Insufficient water flowing into brine tank.	Check brine tank fill time and clean brine line flow control if plugged.
	Hot water tank hardness.	Repeated flushings of the hot water tank is required.
	Leak at distributor tube.	Make sure distributor tube is not cracked. Check o-ring and tube pilot.
	Internal valve leak.	Replace seals and spacers and/or piston.
Unit used too much salt.	Improper salt setting.	Check salt usage and salt setting.
	Excessive water in brine tank.	See "Excessive water in brine tank".
Loss of water pressure.	Iron buildup in line to water conditioner.	Clean line to water conditioner.
	Iron buildup in water conditioner.	Clean control and add mineral cleaner to mineral bed. Increase frequency of regeneration.
	Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system.	Remove piston and clean control.
Loss of mineral through drain line.	Air in water system.	Assure that well system has proper air eliminator control. Check for dry well condition.
	Improperly sized drain line flow control.	Check for proper drain rate.
Iron in conditioned water.	Fouled mineral bed.	Check backwash, brine draw, and brine tank fill. Increase frequency of regeneration. Increase backwash time.
Excessive water in brine tank.	Plugged drain line flow control.	Clean flow control.
	Plugged injector system.	Clean injector and screen.
	Timer not cycling.	Replace timer.
	Foreign material in brine valve.	Replace brine valve seat and clean valve.
	Foreign material in brine line flow control.	Clean brine line flow control.
Softener fails to draw brine.	Drain line flow control is plugged.	Clean drain line flow control.
	Injector is plugged.	Clean injector
	Injector screen plugged.	Clean screen.
	Line pressure is too low.	Increase line pressure to 20 psi
	Internal control leak	Change seals, spacers, and piston assembly.
	Service adapter did not cycle.	Check drive motor and switches.
Control cycles continuously.	Misadjusted, broken, or shorted switch.	Determine if switch or timer is faulty and replace it, or replace complete power head.
Drain flows continuously.	Valve is not programming correctly.	Check timer program and positioning of control. Replace power head assembly if not positioning properly.
	Foreign material in control.	Remove power head assembly and inspect bore. Remove foreign material and check control in various regeneration positions.
	Internal control leak.	Replace seals and piston assembly.

WATER CONDITIONER FLOW DIAGRAMS - DOWNFLOW

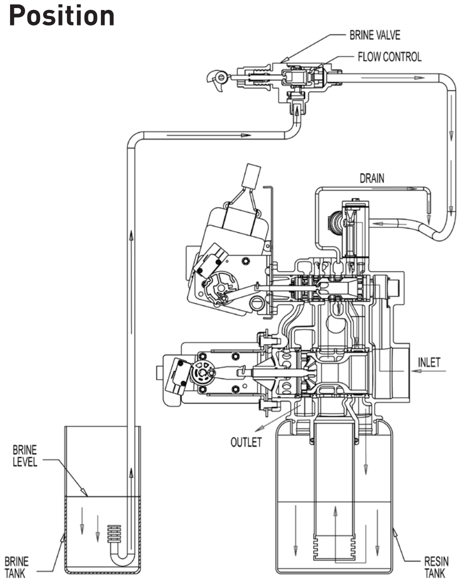
1 Service Position



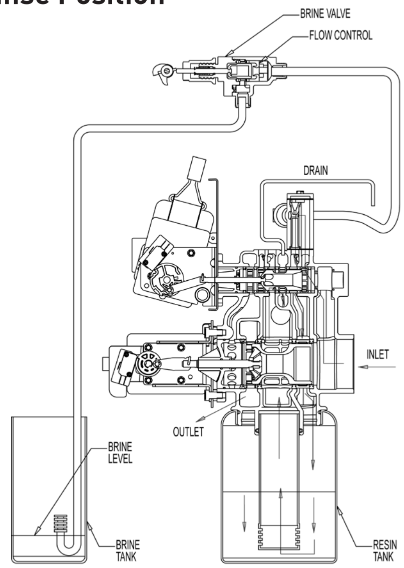
2 Backwash Position



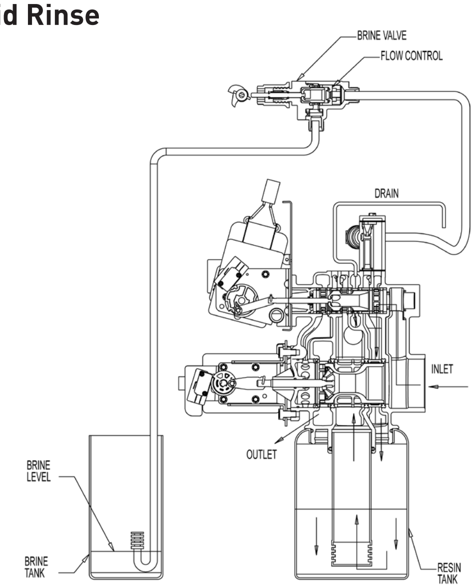
3 Brine Position



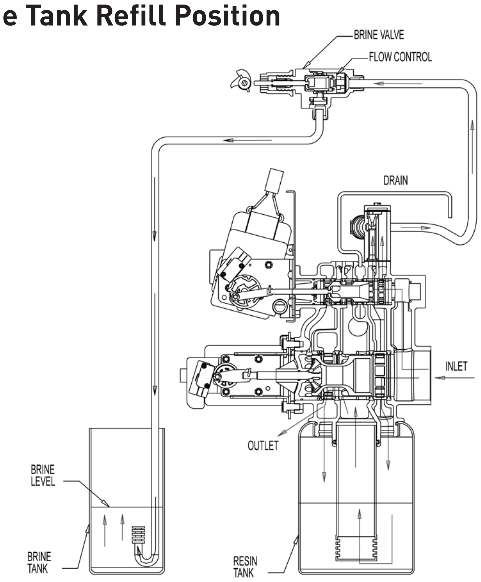
4 Slow Rinse Position



5 Rapid Rinse



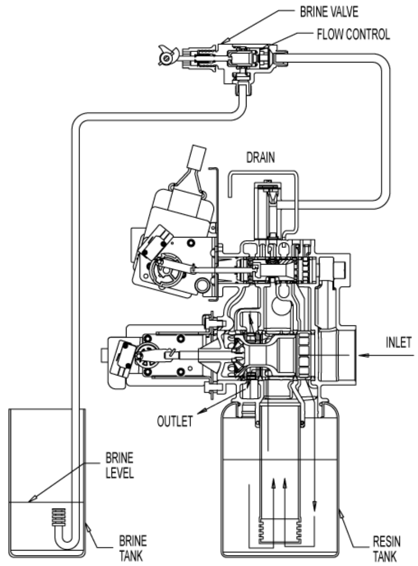
6 Brine Tank Refill Position



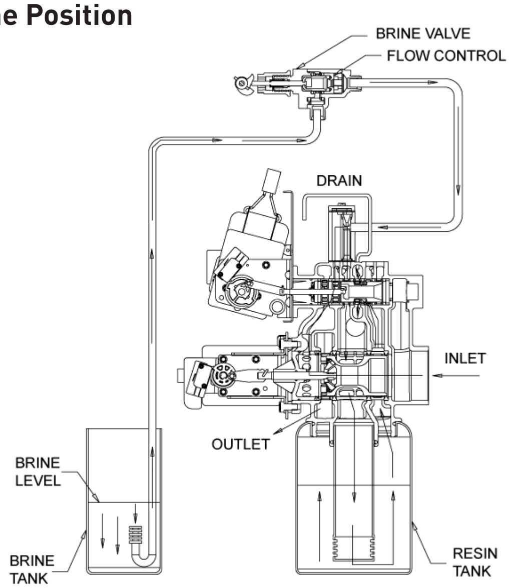
61500-2900 DOWNFLW Rev F

WATER CONDITIONER FLOW DIAGRAMS - UPFLOW

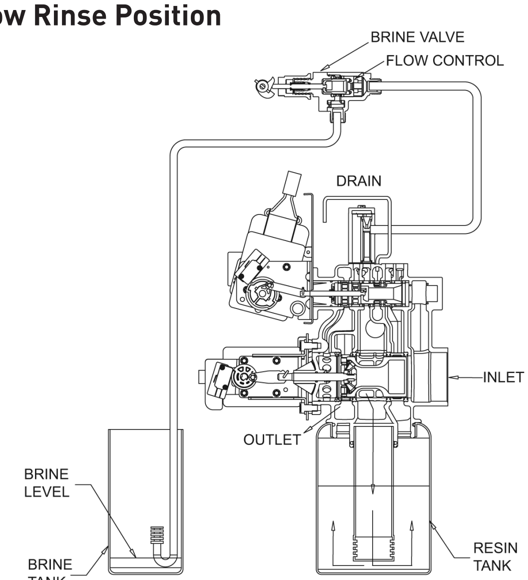
1 Service Position



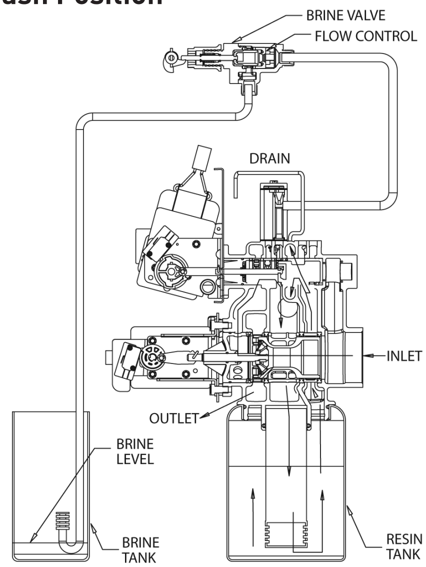
2 Brine Position



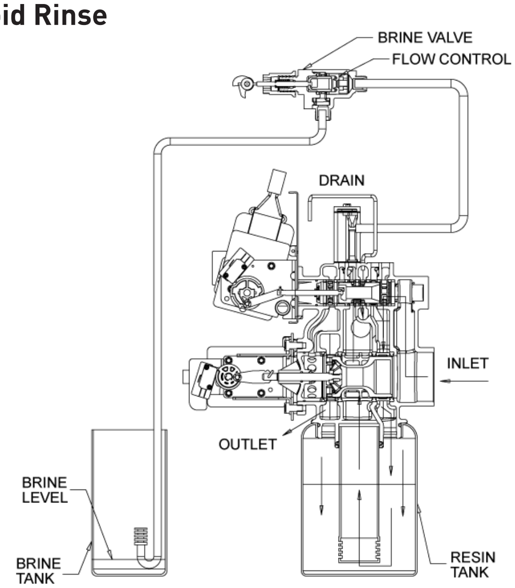
3 Slow Rinse Position



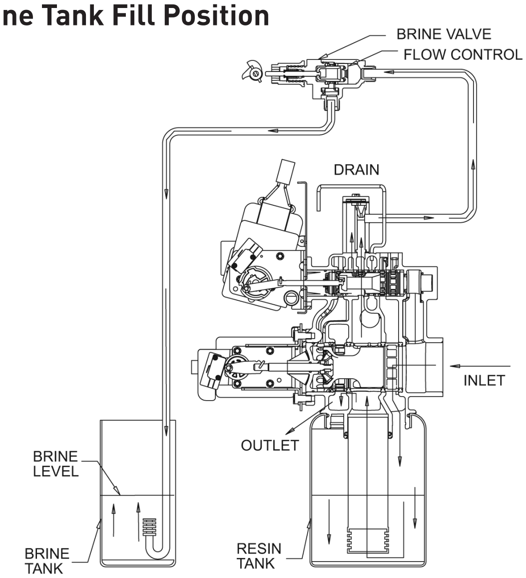
4 Back Wash Position



5 Rapid Rinse

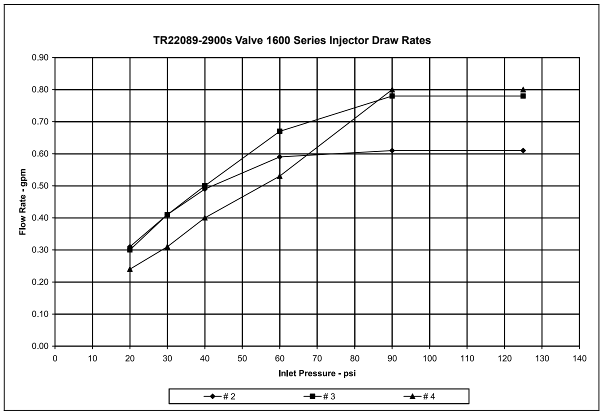


6 Brine Tank Fill Position

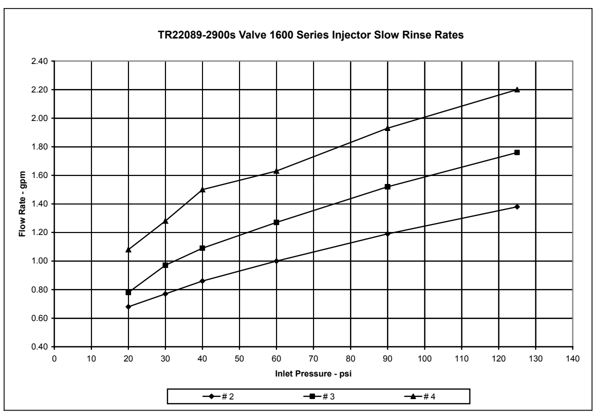


61500-2900 UPFLW Rev F

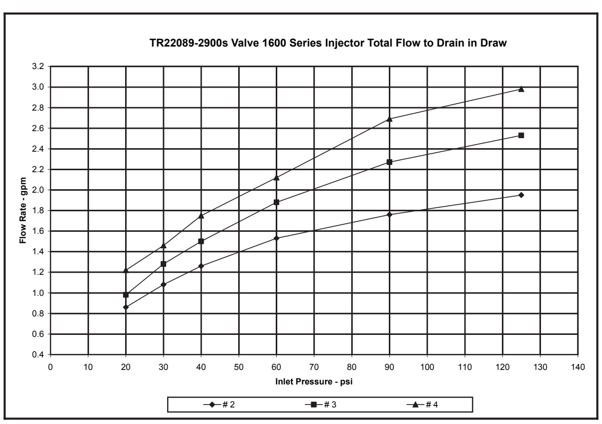
FLOW DATA & INJECTOR DRAW RATES - DOWNFLOW

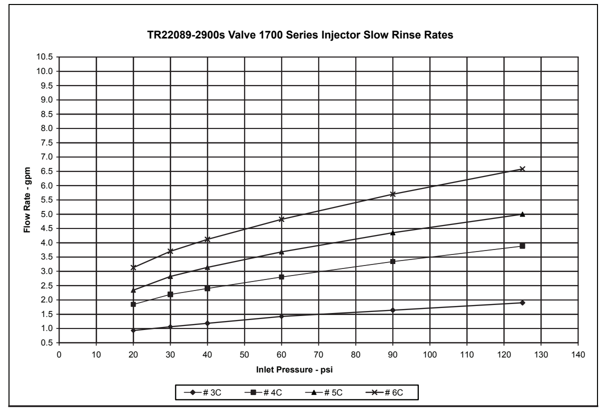


1600 series injectors	Draw Rate - gpm		
pressure	# 2	# 3	# 4
20	0.31	0.30	0.24
30	0.41	0.41	0.31
40	0.49	0.50	0.40
60	0.59	0.67	0.53
90	0.61	0.78	0.80
125	0.61	0.78	0.80
all injectors used the steel cap and an air disperser			

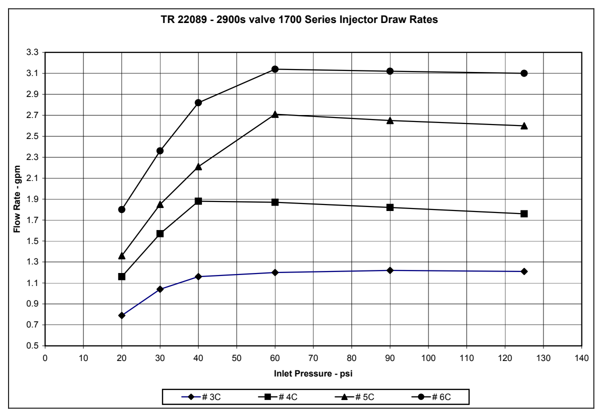


1600 series injectors	Slow Rinse Rates - gpm		
pressure	# 2	# 3	# 4
20	0.68	0.78	1.08
30	0.77	0.97	1.28
40	0.86	1.09	1.50
60	1.00	1.27	1.63
90	1.19	1.52	1.93
125	1.38	1.76	2.20
all injectors used the steel cap and an air disperser			

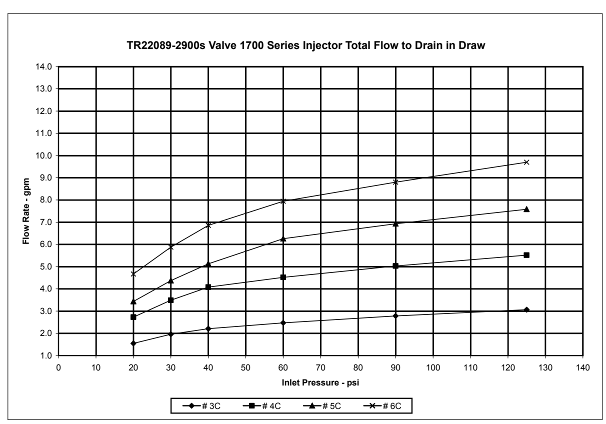




1700 series injectors	Slow Rinse - gpm			
pressure	# 3C	# 4C	# 5C	# 6C
20	0.93	1.84	2.34	3.13
30	1.06	2.19	2.82	3.70
40	1.18	2.40	3.14	4.12
60	1.42	2.80	3.68	4.82
90	1.64	3.34	4.35	5.70
125	1.90	3.88	5.00	6.58
# 3C - steel cap, no o-ring, air disperser # 4C & 5C - steel cap, o-ring, air disperser # 6C & 7C - brass cap, o -ring, no air disperser				

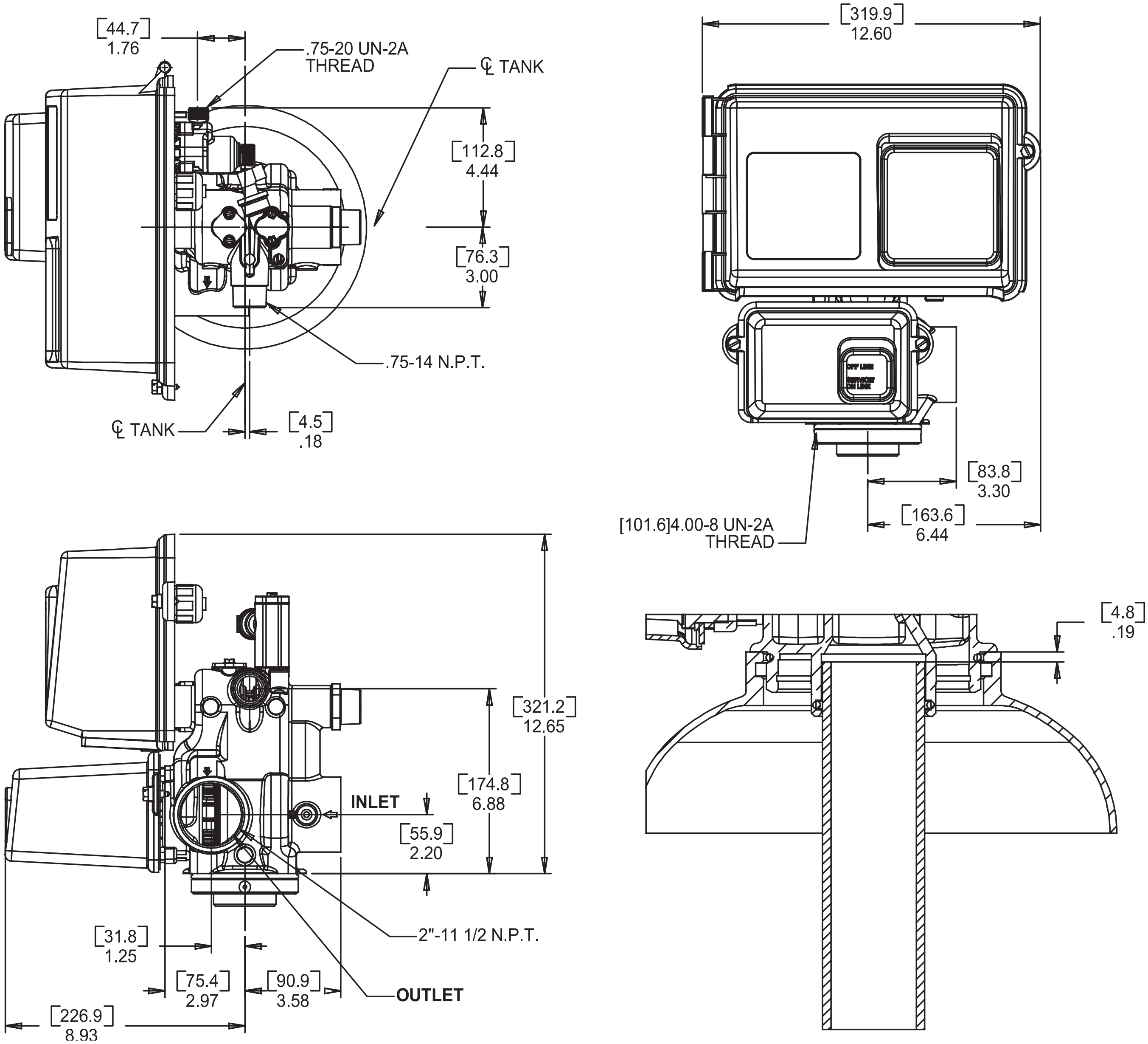


1700 series injectors	Draw Rate - gpm			
pressure	# 3C	# 4C	# 5C	# 6C
20	0.79	1.16	1.36	1.80
30	1.04	1.57	1.85	2.36
40	1.16	1.88	2.21	2.82
60	1.20	1.87	2.71	3.14
90	1.22	1.82	2.65	3.12
125	1.21	1.76	2.60	3.10
# 3C - steel cap, no o-ring, air disperser # 4C & 5C - steel cap, o-ring, air disperser # 6C - brass cap, o -ring, no air disperser				



TR22089 Rev A

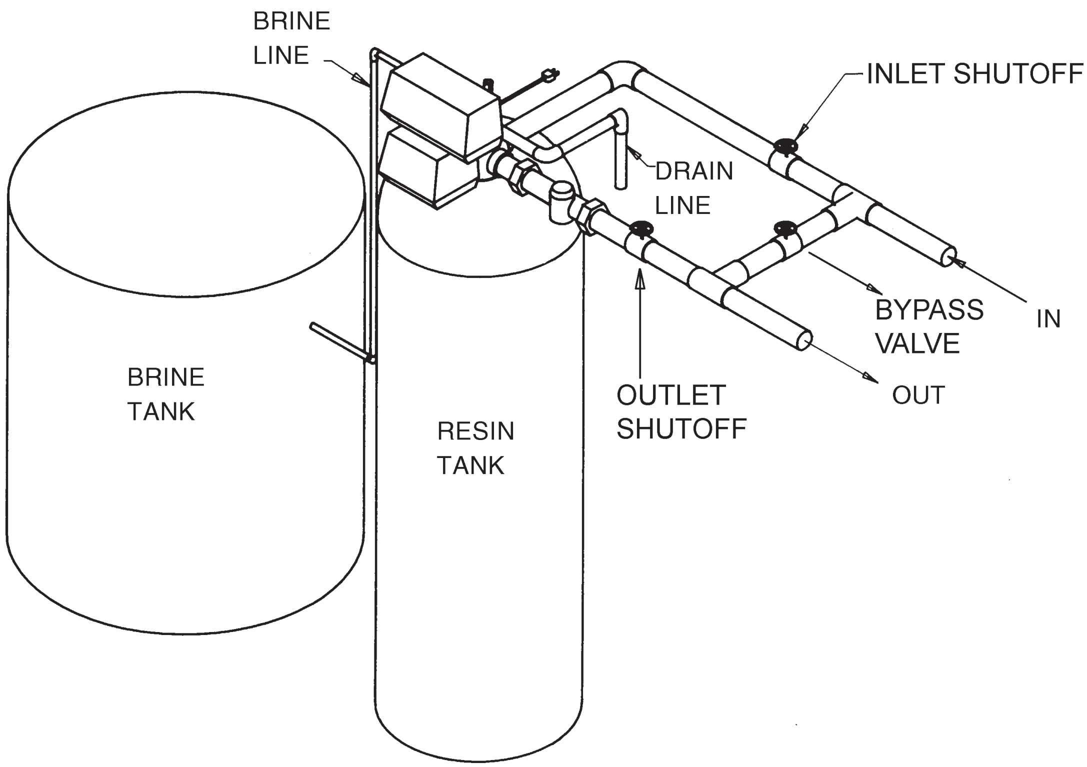
ENVIRONMENTAL BACKPLATE DIMENSIONS



61500-2900LNE Rev B

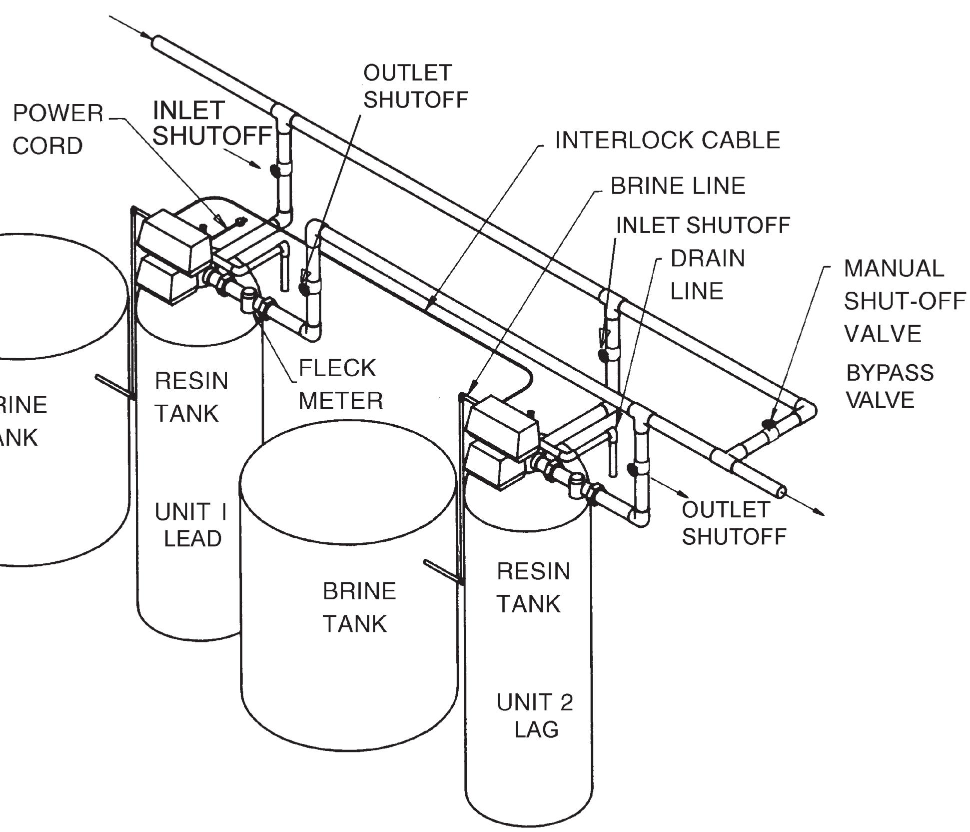
SYSTEM #4

Typical Single Tank Installation with Optional Meter



SYSTEM #5 INTERLOCK

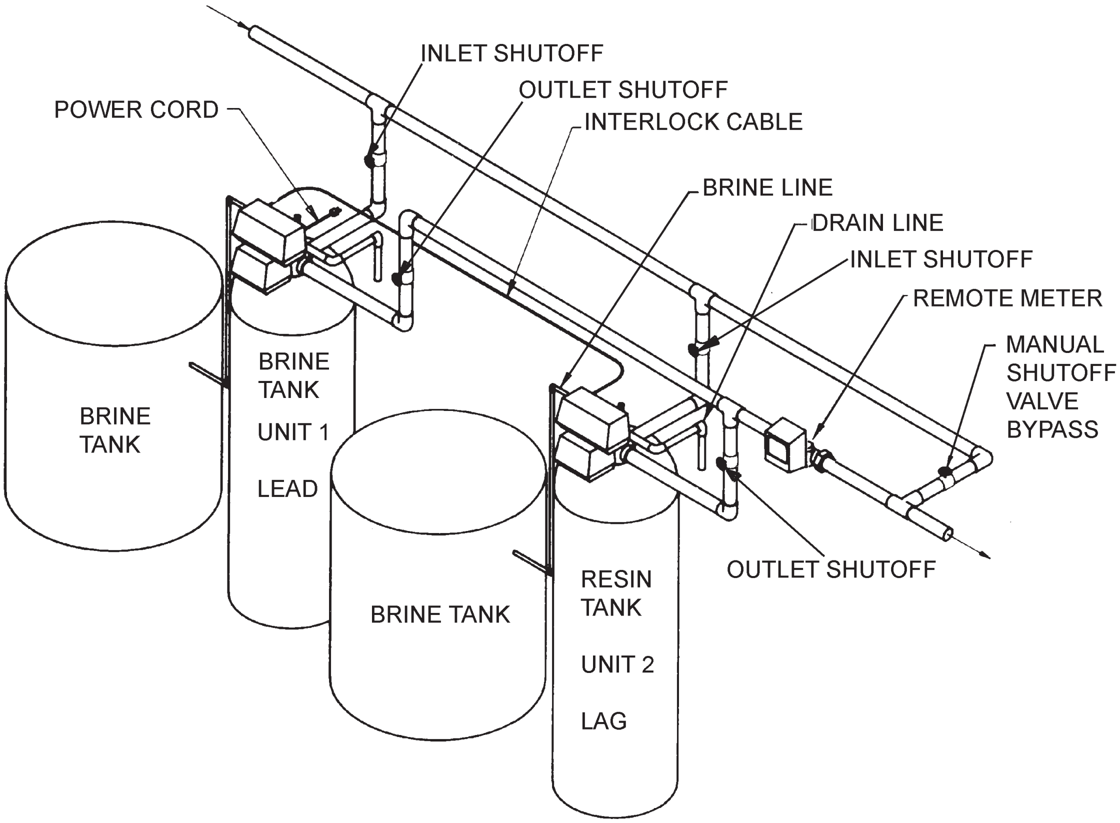
Typical Twin Tank Installation with Optional Meter Interlock and No Hard Water Bypass



SYSTEM #6 & #7

Twin Series Regeneration Installation with a Remote Meter

Twin Alternator Installation

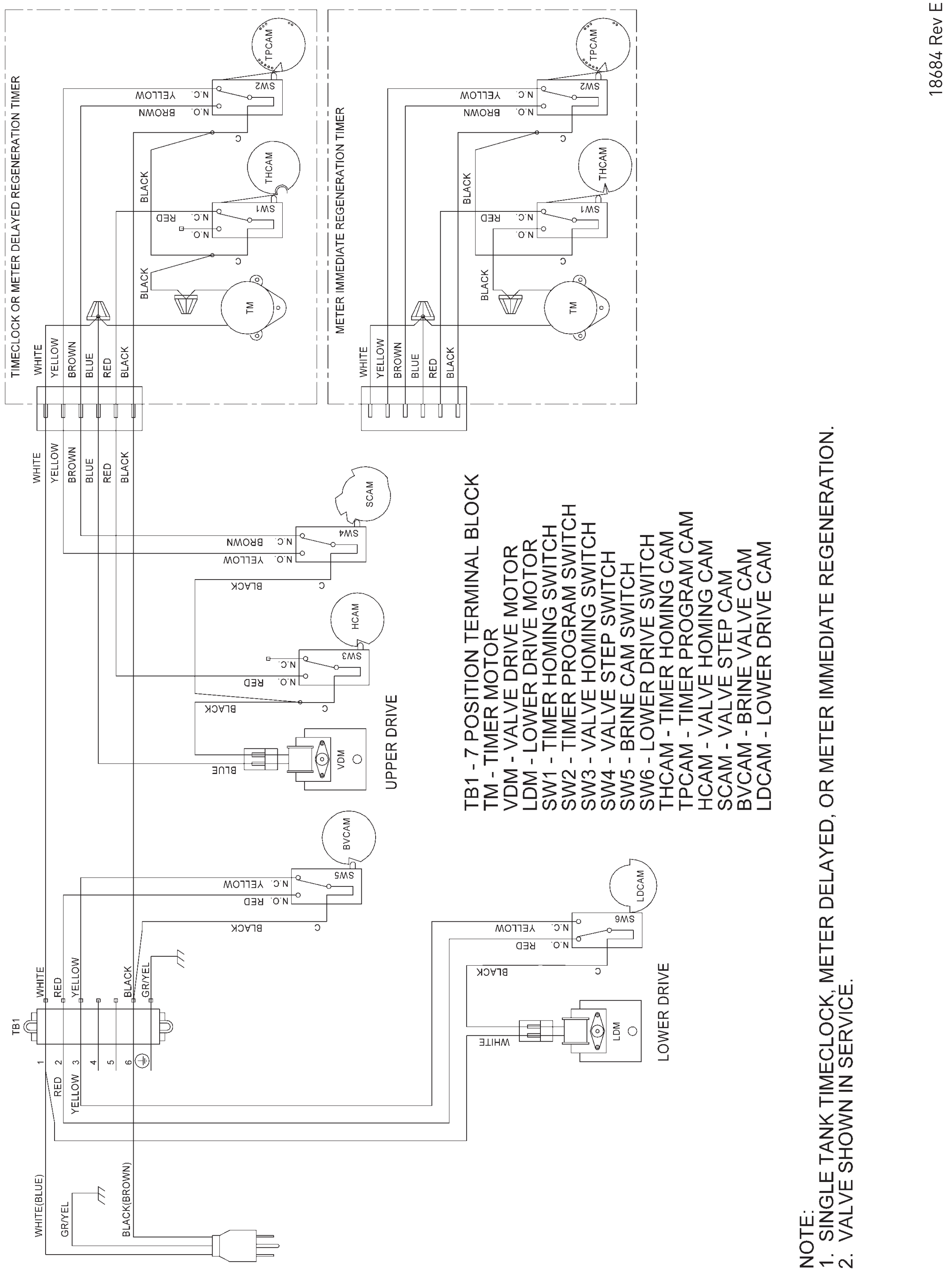


NOTE: On System 7, the power cord is on Unit 2.

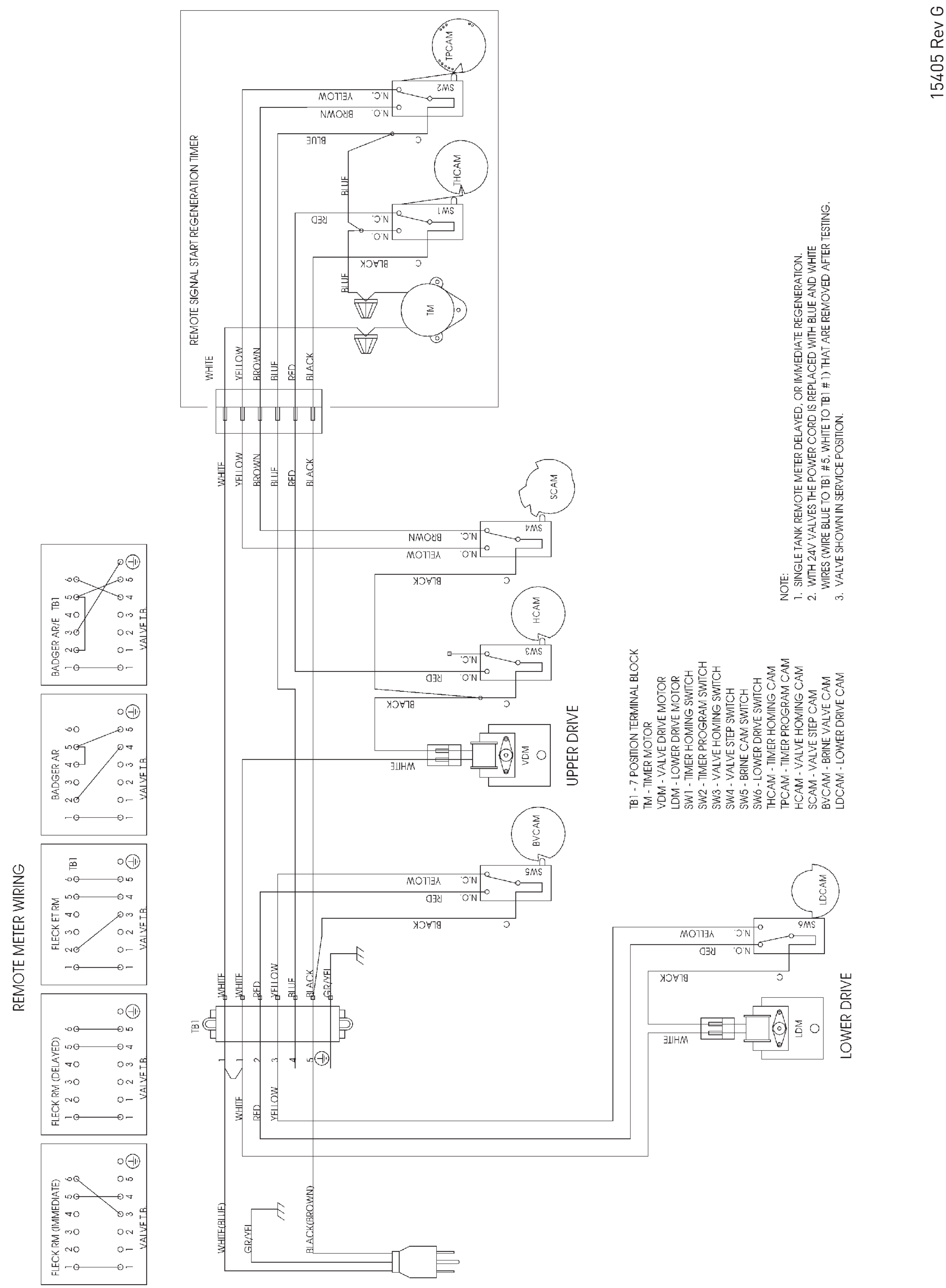
NOTE: System 7 can run with either one or two brine tanks. Two brine tanks should be used if regeneration is less than 4 hours.

SYSTEM #4 WIRING

Single Valve Regeneration Immediate and Delayed Valve Wiring

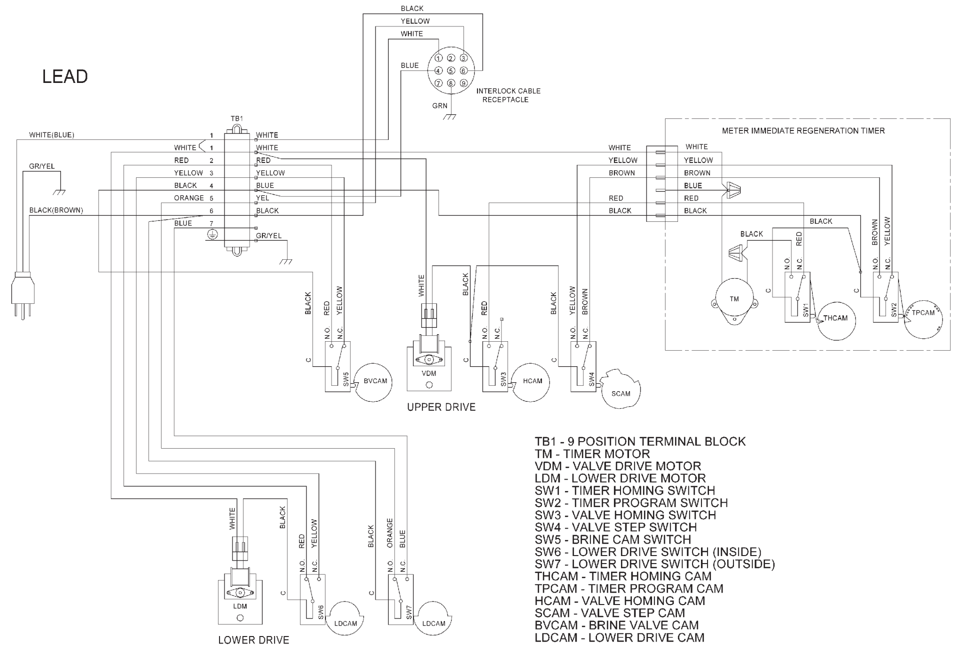


With Remote Starter Valve Wiring



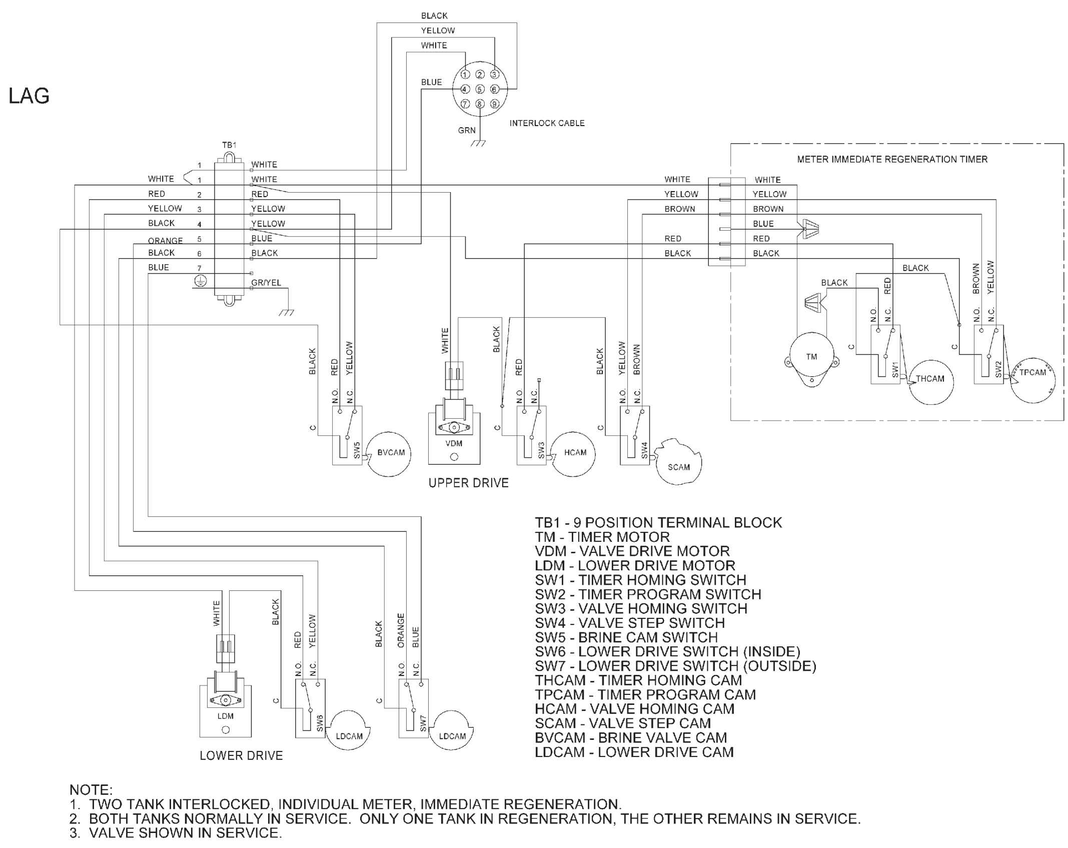
SYSTEM #5 WIRING

Interlocked Regeneration Valve Wiring



NOTE:
1. TWO TANK INTERLOCKED, INDIVIDUAL METER, IMMEDIATE REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
3. VALVE SHOWN IN SERVICE.

18685-01 Rev D

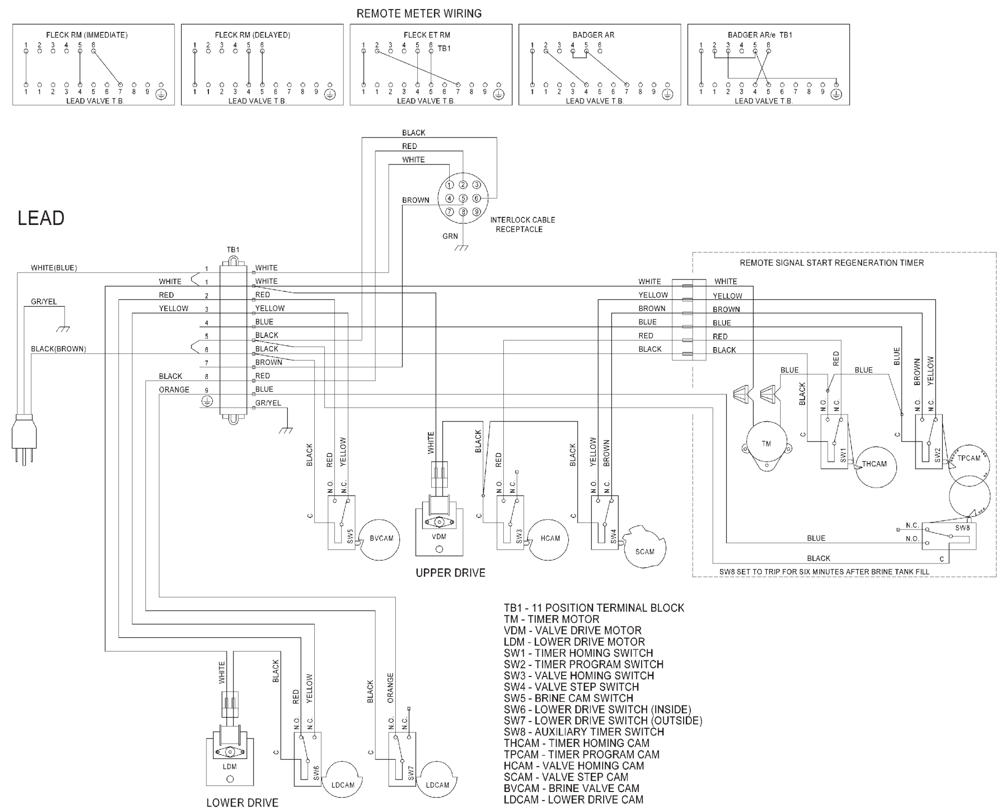


NOTE:
1. TWO TANK INTERLOCKED, INDIVIDUAL METER, IMMEDIATE REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
3. VALVE SHOWN IN SERVICE.

18685-02 Rev D

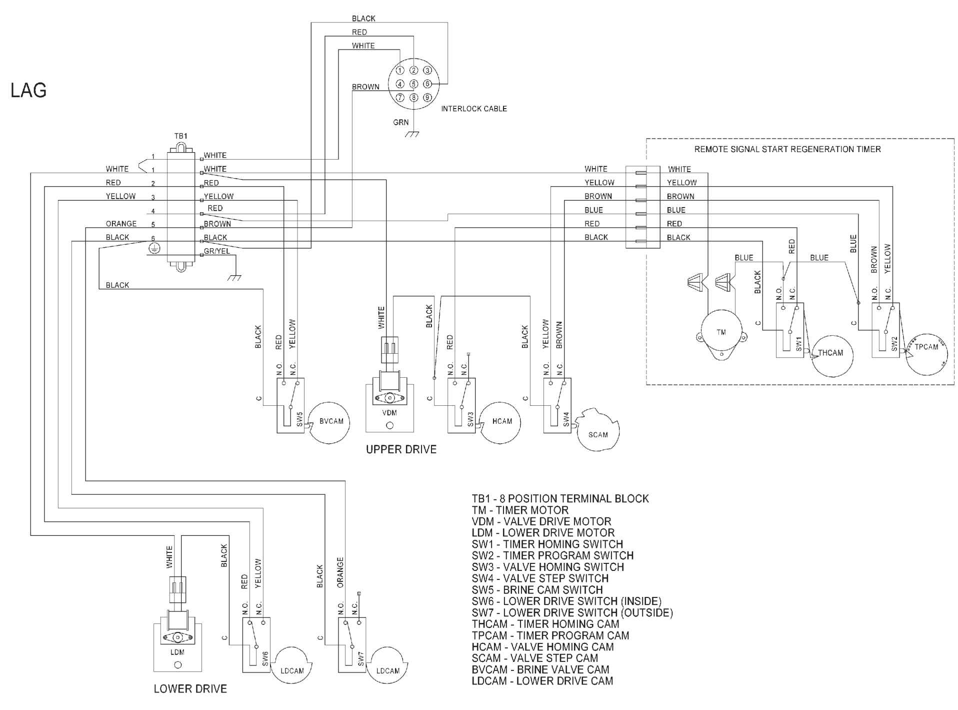
SYSTEM #6 WIRING

Series Regeneration Valve Wiring



NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE.
3. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
4. LEAD VALVE REGENERATES FIRST, FOLLOWED IMMEDIATELY BY LAG VALVE.

18686-01 Rev E

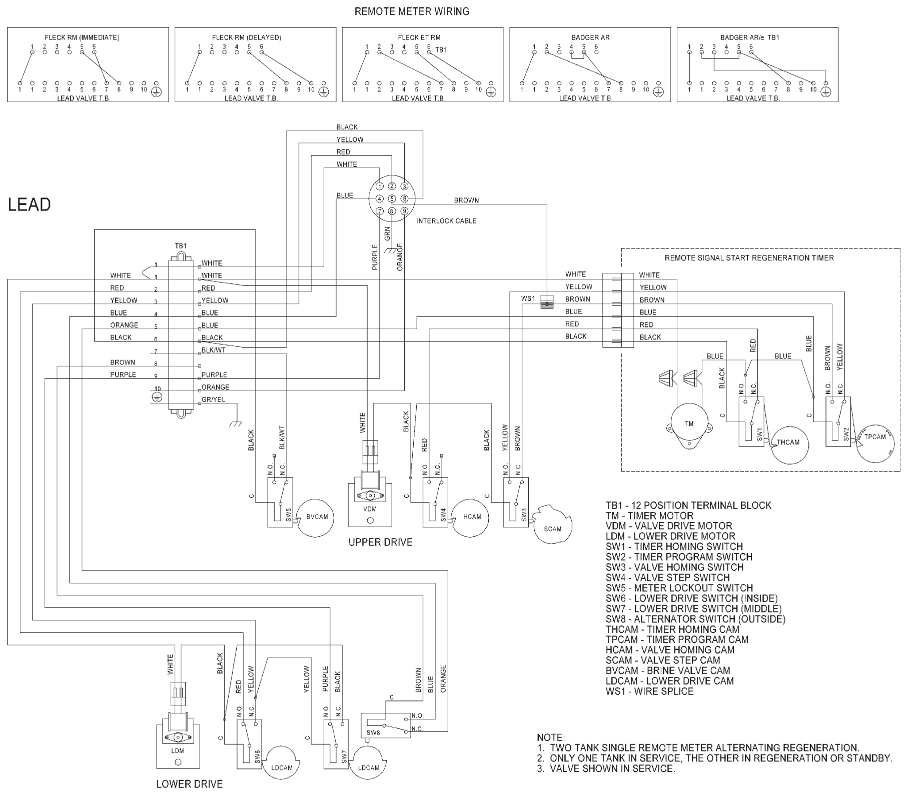


NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE.
3. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
4. LEAD VALVE REGENERATES FIRST, FOLLOWED IMMEDIATELY BY LAG VALVE.

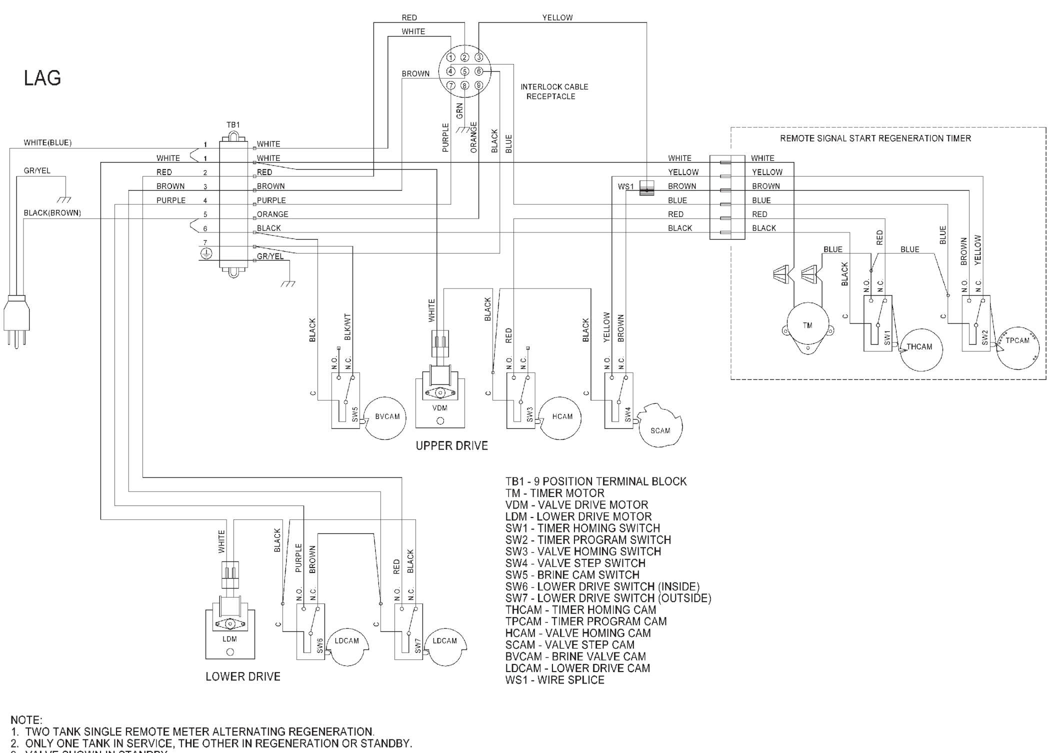
18686-02 Rev E

SYSTEM #7 WIRING

Alternating Regeneration Valve Wiring

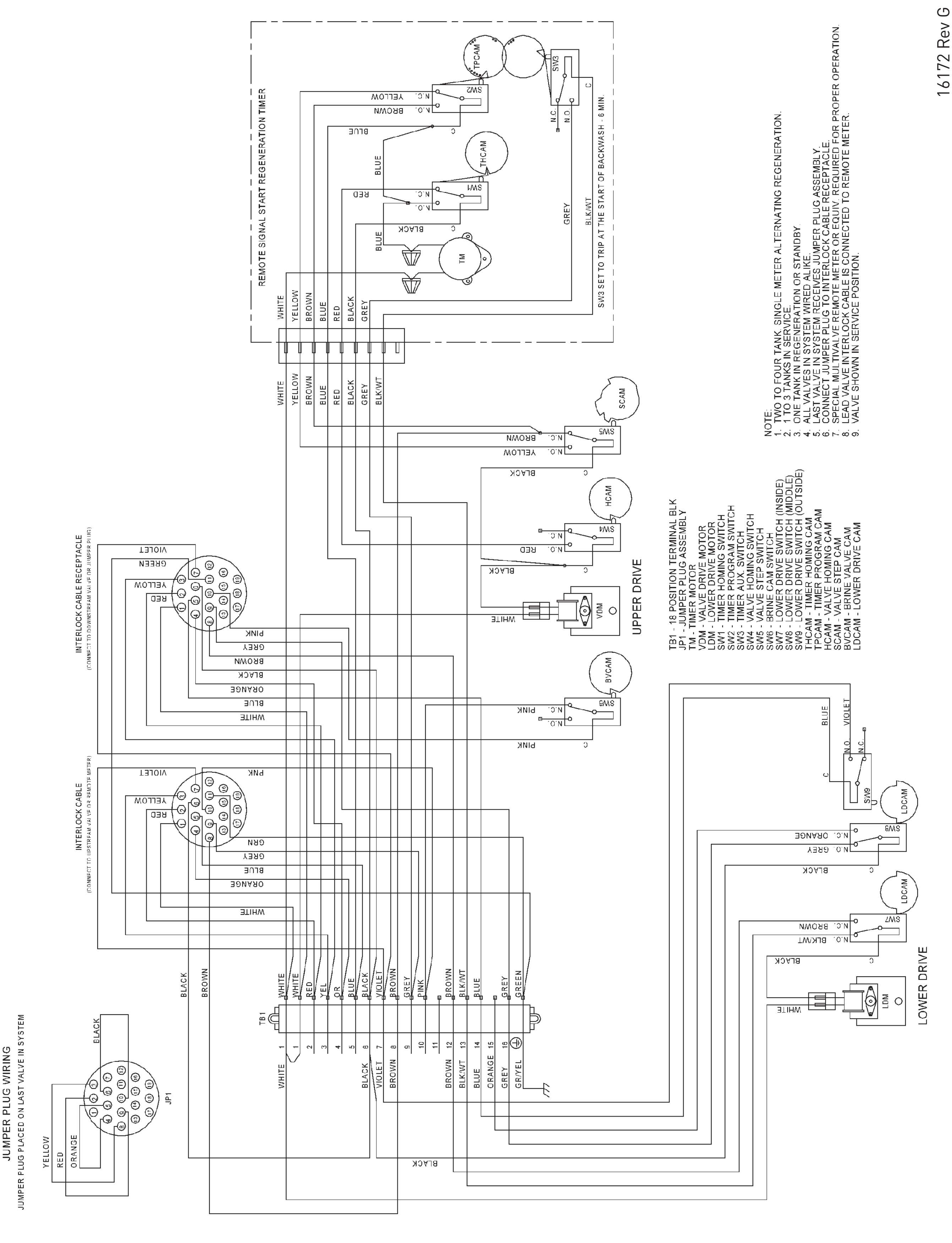


18687-01 Rev E



18687-02 Rev E

SYSTEM #7 WIRING *CONTINUED*



1600/1700 SYSTEM NOZZLE & THROAT CHART

1600 Brine System

Standard

Size	Color	Nozzle	Throat
#0	Red	10913-0	10914-0
#1	White	10913-1	10914-1
#2	Blue	10913-2	10914-2
#3	Yellow	10913-3	10914-3
#4	Green	10913-4	10914-4

PVC

Size	Color	Nozzle	Throat
#0	Gray	12973-0	12974-0
#1	Gray	12973-1	12974-1
#2	Gray	12973-2	12974-2
#3	Gray	12973-3	12974-3
#4	Gray	12973-4	12974-4

Stainless Steel

Size	Color	Nozzle	Throat
#0	Silver	10225-0	10226-0
#1	Silver	10225-1	10226-1
#2	Silver	10225-2	10226-2
#3	Silver	10225-3	10226-3
#4	Silver	10225-4	10226-4

1700 Brine System

Standard

Size	Color	Nozzle	Throat
#3	Yellow	14801-03C	14802-03C
#4	Green	14801-04C	14802-04C
#5	White	14801-05C	14802-05C
#6	Red	14801-06C	14802-06C

SERVICE ASSEMBLIES

Adapters:

61525 .... Softwater Adapter Kit, 2900s
61415 .... Adapter Assy, Sidemount 2850/2900/2930
61415NP .... Adapter Assy, Sidemount, NP 2850/2900/2930
61415-20 .... Adapter Assy, Sidemount, BSP/MTC 2850/2900/2930
61415-20NP .... Adapter Assy, Sidemount, BSP/NP 2850/2900/2930

Air Checks:

60002-34 .... Air Check, #500, 34 inches Long
60003-34 .... Air Check, #500, HW, 34 inches Tube
60009-01 .... Air Check, #900, Commercial, HW Less Fittings

Auxiliary Micro Switch:

60320-02 .... Switch Kit, 3200/9000 Timer Auxiliary
60320-11 .... Switch Assy, 2900, Lower Drive (For Adding 2nd Switch)
60320-08 .... Switch Assy, 2900, Lower Drive Aux (For Adding Third Switch)

Brine Line Flow Controls (BLFC):

60020-25 .... BLFC, .25 GPM, 1600
60020-50 .... BLFC, .50 GPM, 1600
60020-100 .... BLFC, 1.0 GPM, 1600
60011-090 .... Brine Valve, 1650, Short Stem
60010-25 .... BLFC, 1650, .25 GPM, Plastic
60010-50 .... BLFC, 1650, .50 GPM, Plastic
60010-100 .... BLFC, 1650, 1.0 GPM, Plastic

Brine Valves:

60011 .... Brine Valve, 1650, Less BLFC
60029 .... Brine Valve, 1600, Short Stem Brass, Std O-rings
60029HW .... Brine Valve, 1600, Short Stem Hot Water
60034-XX .... Model 1700 brine valve assy (specify flow control 1.0 - 5.0)
60604-XX .... Model 1710 brine valve assy (specify flow control 1.0 - 5.0)

Covers:

60217-02 .... Environmental Lower Cover, Black
60219-02 .... Environmental, Cover, Black
60232-XX .... Designer 2 Piece
60232-110 .... Cover, Designer, 1 Piece Black
14800-02 .... Cover, Dust, Lower, 2900, Black

Drain Line Flow Controls (DLFC):

60366-XX .... 1-inch FNPT x 3/4-inch FNPT (specify flow control .6 - 7.0)
60701-XX .... 1-inch FNPT x 1-inch FNPT (specify flow control 8.0 - 25.0)
60702-XX .... 1-inch FNPT x 1-inch MNPT (specify flow control 8.0 - 25.0)
60708-XX .... 1-inch FNPT x ¾-inch FNPT (specify flow control 8.0 - 25.0)
60721-XX .... 1-inch FNPT x 1-inch FNPT (specify flow control .6 - 7.0)

Cam Assemblies:

60160-00 .... Drive Cam Assy, RR, White
60160-20 .... Drive Cam Assy, Std
60160-22 .... Drive Cam Assy, Link, Environmental 2900 Lower Drive
60160-30* .... Drive Cam Assy, Upflow
60160-31* .... Drive Cam Assy, Upflow, Variable

24-Hour Gear Assemblies:

19205 .... Gear Assy, 24 Hour, Silver, 5600, 12 A.M.
60519-02 .... Gear Assy, 3200 24 Hour 2 Times/Day, w/ Silver Label
60519-03 .... Gear Assy, 3200, 24 Hour 3 Times/Day, w/Silver Label
60519-04 .... Gear Assy, 3200, 24 Hour 4 Times/Day, w/Silver Label
60519-06 .... Gear Assy, 3200, 24 Hour (12:00) 6 Times/Day, w/Silver Label

Injector Assemblies (Complete):

60480-XX .... 1600/1650 - 3/8-inch brine (specify size of injector)

Meters:

60393 .... Meter Assy, 2900, 2-inch Std
60394 .... Meter Assy, 2900, 2-inch Ext
60616 .... Meter Assy, Elec 2-inch
60620 .... Meter Assy, 2-inch Plastic, Std
60621 .... Meter Assy, 2-inch Plastic, Ext
60625 .... Meter Assy, 2-inch Plastic Electronic
61439 .... Meter Sleeve w/O-ring, Machd

Piston Assemblies:

60103 .... Piston Assy, 2900/2930, HWBP Lower
60103-01 .... Piston Assy, 2900/2930, HWBP, HW, Lower
60104 .... Piston Assy, 2900/2930, NHWBP Lwr, 2900s, Soft Wtr Rgn
60104-01 .... Piston Assy, 2900/2930, NHWBP, HW Lwr, 2900s Soft Wtr Rgn
61540 .... Piston Assy, 2900s, Downflow Upper
61540-01 .... Piston Assy, 2900s Downflow Upper, HW
61545* .... Piston Assy, 2900s, Upflow Upper
61545-01* .... Piston Assy, 2900s, Upflow Upper, HW
61550 .... Piston Assy, 2900s, HWBP Lower
61550-03 .... Piston Assy, 2900s, HWBP Lower, HW
61555 .... Piston Assy, 2900s, NHWBP Lower
61555-03 .... Piston Assy, 2900s, NHWBP Lower, HW

Program Wheel Assemblies:

60405-20 .... Program Wheel, w/3/4-inch Ext Label 1-1/2 inch Std Set @ 100
60405-50 .... Program Wheel, w/2-inch Std Label Set @ 21
60405-60 .... Program Wheel, w/2-inch Ext Label
60405-70 .... Program Wheel, w/1-1/2 inch Ext Label

SERVICE ASSEMBLIES *CONTINUED*

Safety Brine Valves:

60014........................... Safety Brine Valve Assy, 2310
60038........................... Safety Brine Valve , 2350
60027-FFA.................. Safety Brine Valve Body, 2300 Fitting Facing Arm
60027-FFS.................. Safety Brine Valve Body Fitting Facing Stud
60026-30SAN............. Float Assy, 400A/2350, 30-inch HW
60028-30 .... Float Assy, 2300, 30-inch White
60028-30 .... Float Assy, 2300, 30-inch, Blue/White
60068-30 .... Float Assy, 2310, w/30-inch Rod

Sales & Service Aids:

40738........................... Literature, 2900 Spec Sheet
41689........................... Literature, 2900s S/Manual
40717........................... Literature, Catalog Assy, PWT Residential/Commercial

Seal & Spacer Kits:

61530........................... Seal & Spacer Kit, 2900s Upper
61530-01 .... Seal & Spacet Kit, 2900s, HW Upper
60128........................... Seal & Spacer Kit, 2900/2930 Lower
60128-01 .... Seal & Spacer Kit, 2900/2930, HW Lower

Service Equipment:

11098........................... Stuffer Tool Assy, Complete
12682........................... Puller Tool Assy, 2900/3150
12683........................... Stuffer Tool Assy, 2900/3150
13061........................... Puller Assy, Port Ring
16174........................... Silicone, 2 oz. Tube
60460........................... Meter Checker Kit, Std
60461........................... Meter Checker Kit, Ext
16586-8 .... Silicone, Dow #7 8 Lb

Service Valve Operator Assemblies:

60150........................... SVO Assy, 1600 O/S
60150-01 .... SVO Assy, 1600 N/S

Skipper Wheel Assemblies:

14860........................... Skipper Wheel Assy, 7 Day
14381........................... Skipper Wheel Assy, 12 Day
*Upflow Only

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